



SOUTHERN RHODESIA

REPORT
on the
PUBLIC HEALTH
For the Year 1951

PRESENTED TO THE LEGISLATIVE ASSEMBLY
1952

Printed by The Rhodesian Printing and Publishing Company, on the
Authority of The Government Printer.

1952

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Report on the Public Health for the Year 1951

The Minister of Health.

Sir,

I have the honour to submit the Annual Report of the Health Department for the year, 1951.

I have the honour to be, Sir, your obedient servant,

R. M. MORRIS, O.B.E., M.D., D.P.H.,

Secretary for Health, Medical Director and Chief Health Officer.

INTRODUCTION.

It is not possible to claim that any great changes in the Department of Health were effected during this year, but steady expansion is to be noted in most activities.

One satisfactory feature is, that with the exception of certain specialist appointments, recruiting in all other grades has been somewhat easier than for some years and a wider choice among suitable applicants has become available. In the general duties grade of Government Medical Officer, a number of Southern Rhodesians are now available for appointment.

The difficulty with regard to the specialist appointments arises from the relatively high rates of emoluments offered in the United Kingdom National Health Service for some specialists compared with the local grading in the Colony and, furthermore, to the existence of certain perquisites overseas, which are not available in Southern Rhodesia. The difference in emoluments is not usually considered by applicants to be sufficiently offset by the marked difference in incidence of income tax.

During the year, the Secretary for Health attended the Fourth World Health Assembly and also the First Meeting of the African Regional Committee of the World Health Organisation. Great hopes are placed on the latter as an example of international co-operation in the sphere of health in Africa, South of the Sahara and it is anticipated that with energetic guidance, this body will be able materially to assist in the vast problem of bringing health and well-being to the inhabitants of this area. Pooling of knowledge and details of experience, gained after experimental work in one or other of the territories, should hasten the improvement in health as well as avoiding unnecessary expenditure and overlapping.

In the Colony, all the previous work has continued and been expanded. Details appear in the body of this report, but it may be permitted here to allude to some of the individual problems, not necessarily as being of greater importance than others, but because of some topical interest in them.

Tuberculosis.

The Martin Sanatorium at Mkumbi in the Chindamora Reserve continues to do excellent work on specially selected cases of Pulmonary and Bone and Joint Tuberculosis, not only in the immediate treatment of individuals, but in assessing the value of various schemes of treatment in types of these diseases in the Bantu. In particular, combined courses of Streptomycin and P.A.S. are proving of very great immediate value, albeit very expensive and still with much doubt as to the duration of the improvement.

It has been possible, during the year, to start the building of a similar institution of 120 beds in Matabeleland, which will have similar functions. Two or three of the subsidised medical missions are also able to provide special facilities for these patients, but elsewhere it is still necessary to admit and treat them in general hospitals, in many of which there are no special wards or blocks adequate to provide for segregation of the larger number of cases presenting for treatment.

It is, however, difficult to state with any precision, whether this increase in demand for European methods of treatment is any indication of an increase in incidence of the disease or merely a further indication of the almost universal acceptance by the Africans in the Colony of the European viewpoint with regard to medical services in general.

It is also impossible to substantiate by statistics the view very generally held by clinicians who see most of these patients, that there is a decrease in the numbers of the really acute types of tuberculous infections with a corresponding increase in the more chronic types approximating more closely to those seen in Europe. This feature raises many problems, in that it is still a matter of great difficulty and rarity to render these patients bacteriologically negative, with all the risks of further spread which are entailed in having large numbers of patients with moderately good general health, but still able to carry the infection to others.

It would be rash to be dogmatic in this matter, but there is nevertheless, a strong impression among clinicians that the Bantu, especially in urban surroundings, is slowly acquiring a far greater degree of resistance to this infection. Nevertheless, acute primary cases are still by no means uncommon and one unpleasing feature has been the continued high incidence of infections among those whose duties bring them into direct and close contact with tuberculous patients. For this reason, during 1951, it was decided to introduce a scheme of B.C.G. vaccination primarily for this group and subsequently for others, including scholars in African schools in urban areas.

The B.C.G. vaccine is imported in liquid form from Copenhagen and the methods follow closely those ultimately adopted by the International Tuberculosis Campaign. In the small numbers so far covered, very satisfactory conversion rates have been obtained.

It is hoped to enlist the enthusiasm of medical officers in the larger industrial concerns and through them, to offer B.C.G. vaccination to the very large numbers of Africans employed in organised industry and their dependants.

Poliomyelitis.

In the year under review, this disease showed some epidemiological features new to this Colony. Normally, the annual peak of incidence is at the beginning of the cool season (May-July) and is scarcely evident during the hotter months (October-December).

During 1951, there were, apart from a few cases in May, hardly any others till October, when the unusual occurrence of several cases in various parts of the Colony became known. This state of affairs continued unabated till the end of the year. Other unusual features were the number of instances of multiple paralytic cases in the same household—in one instance two cases out of six at risk with two deaths. The higher ratio of bulbar forms of the disease to spinal forms was very apparent and accounts for the high mortality rate.

There is still no satisfactory explanation for the much lower attack rate in Africans than in Europeans.

Leprosy.

The successful use of sulphetrone and D.P.S. in this disease, even in lepromatous cases, is now becoming so well known that Africans, even in the most remote areas, are voluntarily coming forward for admission to the leprosaria. This has the temporary effect of straining their resources, but such is to be expected at this stage and in due course must have the result of lowering the incidence of the disease.

By the use of these curative agents, it is now possible to lessen very considerably the stay of patients in the special hospitals, but a cautious policy is still being pursued of keeping all patients under strict observation for at least three months after their first bacteriologically negative report. Some are kept for a further three months if their homes are not within reasonable distance of clinics from which further supplies of drugs can be drawn.

PREVENTIVE SERVICES.

Malaria.

The Mazoe Valley Project came to an end on August 31st, 1951. Its success conclusively proved that it was possible to train a single team to spray residual insecticides in dwellings from October to April, thus very markedly reducing malaria, and to spray natural waters with copper sulphate from May to September and thus markedly reduce the mollusc vectors of Bilharziasis. The problem remained as to how to get the public to continue the good work in the areas already treated and to expand the principle involved to new areas equally at risk.

A considerable body of opinion has considered that residual insecticide spraying should be made compulsory by law. This idea has been resisted by the Department of Health on the two-fold ground that

- (1) public health measures must always depend for their real success on the educated and voluntary co-operation of the public and;
- (2) there would be much wasteful expenditure in providing the staff to carry out inspections and to arrange for sanctions for non-compliance. In the event, the European communities in many areas are taking steps to have blocks of territory treated with insecticides, sometimes by local action and sometimes by contract with commercial firms.

The most insistent demand, however, has come from the Africans in Reserves. In some fourteen of these, the antimalarial units of the Health Department are working systematically with financial help from the Native Councils and very considerable personal assistance from the Africans individually. In several other reserves, the Native Affairs Department have collaborated with the Native Councils to institute similar schemes, although these are necessarily much less well organised.

The Gwaai Reserve in particular is now in its third year of operation of spraying measures, very largely by their own efforts guided by the local Native Affairs Department staff and with the advice of the local Government Medical Officer and the Regional Medical Officer of Health. With this gratifying evidence of co-operation, it should surely not be necessary to resort to legislative compulsion.

Schools Medical Services.

With the rapid increase in the school population as well as in the numbers of schools, the problem of carrying out the duty of medical inspections of scholars has become well-nigh impossible of solution with present arrangements.

With a total enrolment in the schools of over 35,000, of whom at least 50 per cent. should be examined annually, it is manifestly impossible for the four members of the Schools Medical Service, together with the assistance which can be given by the Government Medical Officers, to cope in a satisfactory manner. This is the more evident when it is remembered that there are less than 200 working days in the year when the schools are open and that often very long distances separate them.

To recruit more medical officers, specially for this purpose, is to have still more man-days on which no school inspections can be done. A scheme is therefore being prepared for introduction next year, whereby the present schools medical service will be incorporated in the Regional Medical Officer of Health scheme, so that all the existing staff will have duties in the Preventive Services which include the medical inspection of scholars. This scheme will also permit of further decentralisation into regional groups, so as to obviate the wastefulness of long journeys and tours of duty.

Cost of Medical Services.

As is not uncommon elsewhere, the constant public demand on the Department of Health is for more and larger hospitals and clinics, with an emphasis on the provision of more local "cottage" hospitals at less distance from local townships.

In previous reports, it has been considered desirable to stress that such a scheme of public health is by far the most expensive that can be adopted, although it is realised that some local curative facilities are desirable, if only on humanitarian grounds.

The ideal, from the administrative point of view, in providing curative institutions of this sort, is to build up such number of well-equipped hospitals at main centres as is essential and to make these as fully equipped in every way as is possible. But it must be remembered that all such provision creates future current expenses on a large scale. The public should therefore realise the implications of their demands and not seek to overburden revenue in the future, unless they are prepared also to pay for the services rendered at reasonable rates. At the present time, general ward fees in Government European and Coloured and Asiatic Hospitals are grossly sub-economic and all services for Africans are entirely free of any charge, direct or indirect.

The corollary of this heavy expenditure is the tendency to starve the preventive side. It seems a conception, difficult for the public to believe, that in fact, well-advised and well-administered expenditure on preventive measures pay far more handsome dividends to the community as a whole, than any equivalent expenditure on curative institutions.

It therefore behoves the medical administrator to keep a careful check on expenditure, so that a just balance and close liaison between prevention and cure is maintained.

CHAPTER I.—VITAL STATISTICS.

(1) *Comparisons with Earlier Years.*

During the past decade, it has been the custom to compare vital statistics and other data with the same data for five and ten years before. In the present report, the comparisons will be given with ten and twenty years before. The figures for the period 1951 are therefore compared with the figures for 1941 and 1931.

(2) *Population of Southern Rhodesia.*

The population is estimated at the 30th June each year:—

	1951	1941	1931
Europeans	138,000	69,330	49,910
Asiatics	4,370	2,570	1,700
Coloured Persons	5,960	3,970	2,402
Africans	2,010,000	1,380,000	1,064,000
TOTAL	2,158,330	1,455,870	1,118,012

On 8th May, 1951, the European, Asiatic and Coloured Persons in the Colony were examined by Census. On that date, the European population was found to be 136,017, an increase of 65 per cent. on the figure at the 1946 Census. The Asiatic population was 4,343 and Coloured Persons numbered 5,964, the percentage increases of 49 and 31 per cent. over the 1946 figures. The previous highest rate of total population growth in an inter-censal period was 27 per cent. between 1926 and 1931.

(3) *Summarised Vital Statistics.*

The vital statistical information concerning the European population is given below:

	1951	1941	1931
Estimated European population	138,000	69,330	49,910
Rate of natural increase per 1,000 of the population	21·6	15·4	15·3
Gross number of immigrants	17,461	599	1,893
Number of European births	3,929	1,763	1,182
Illegitimate births included above	45	26	22
Annual birth rate per 1,000	28·5	25·4	23·6
Number of European deaths	957	696	417
Annual crude death rate per 1,000	6·9	10·0	8·3
Number of infant deaths	98	75	53
Infant mortality per 1,000 live births	25	43	45
Number of still births (not included in either births or deaths)	47	39	(a)
Number of maternal deaths	11	7	6
Maternal mortality rate per 1,000 live births	2·8	4·0	5·1

(a) Figure not available.

The record low crude death rate for 1950 was repeated this year. The natural increase of the population remains at a high level and the present rate has been exceeded on one occasion only, in 1947 when the rate was 21·8 per 1,000 of the population. The infant mortality rate was a record, the previous best rate being in 1949 when 29 infant deaths per 1,000 live births was recorded. The illegitimate birth rate has been about 1·5 per cent. of total live births for the past ten years. The 1951 rate of 1·1 is therefore encouraging.

The still birth rate is also satisfactory and in 1951 this was 11·8 per 1,000 total live and still births, which compares favourably with the provisional figure in the United Kingdom for the same year, 22·9. In 1941 in Southern Rhodesia, the still birth rate was 21·7 per 1,000 total live and still births.

(4) *European Birth Rates.*

Rate per 1,000:	1951	1941	1931
Southern Rhodesia	28·5	25·4	23·6
England and Wales	15·5	14·2	15·8
Union of South Africa	(a)	25·2	25·4

(a) Figure not available.

(5) *European Infant Deaths.*

(I) Causes of Death, 1942-51:

<i>Disease</i>	<i>Number of Deaths</i>	<i>Percentage of Total</i>
Premature birth and diseases of early infancy	531	60·34
Bronchitis and pneumonia	67	7·61
Diarrhoea and enteritis	86	9·77
Malaria	55	6·25
Measles, whooping cough, diphtheria, dysentery	27	3·07
Various, not classified above	114	12·96
TOTAL	880	100·00

(II) Deaths during different months of first year of life, 1942-51:

	<i>Number of Deaths</i>	<i>Percentage of Total</i>
First month	543	61·71
Two months to six months	199	22·61
Six months to twelve months	138	15·68
TOTAL	880	100·00

(III) Causes of Infant Death, 1951:

<i>Inter-national List No.</i>	<i>Cause of Death</i>	<i>Number of Deaths</i>
A 22	Whooping cough	1
A 28	Acute poliomyelitis	1
A 32	Measles	1
A 37	Malaria	3
A 71	Non-meningococcal meningitis	1
A 78	All other diseases of the nervous system and sense organs	1
A 89	Lobar pneumonia	1
A 90	Broncho-pneumonia	2
A 92	Acute bronchitis	1
A 103	Intestinal obstruction and hernia	2
A 104	Gastro-enteritis and colitis, except diarrhoea of the newborn	6
A 121	Infections of skin and subcutaneous tissue	1
A 128	Congenital malformations of circulatory system	9
A 129	All other congenital malformations	5
A 130	Birth injuries	17
A 131	Post-natal asphyxia and atelectasis	11
A 132	Infections of the newborn	1
A 133	Haemolytic disease of the newborn	3
A 134	All other defined diseases of early infancy	4
A 135	Ill-defined diseases peculiar to early infancy, and immaturity un-qualified	26
AE 147	All other accidental causes	1
		98

(IV) Infant Mortality Rates.

Rate per 1,000 live births:	1951	1941	1931
Southern Rhodesia	25	43	41
England and Wales	30	59	66
Union of South Africa	(a)	52	63

(a) Figure is not available.

While the infant mortality rate is more satisfactory, there are still too many infant deaths from preventable causes such as malaria, pneumonia and gastro-enteritis.

Over the past ten years, there has been a gradual change in the proportion of infant deaths recorded in the first month, as compared with the rest of the first year of life. This has increased from about half to over 60 per cent.

(6) *European Deaths.*

(I) European Death Rates per 1,000:

	1951	1941	1931
Southern Rhodesia	6·9	10·0	8·3
England and Wales	12·5	13·5	10·2
Union of South Africa	(a)		9·5

(a) Figure is not available.

(II) Causes of European Deaths 1947-51:

	1951	1950	1949	1948	1947	Total	Per-centage of Total Deaths
1. Heart Diseases	183	182	152	165	123	805	19·3
2. Cancer	163	121	129	97	108	618	14·8
3. Violence	119	113	81	81	70	464	11·1
4. Nervous Diseases	101	77	83	75	70	406	9·7
5. Premature birth and diseases of early infancy ..	78	78	65	55	62	338	8·1
6. Pneumonia and bronchitis	28	28	29	35	26	146	3·5
7. Malaria and blackwater fever	17	14	18	32	25	106	2·5
8. Tuberculosis (all forms)	8	11	13	23	8	63	1·5
9. Diarrhoea and enteritis ..	10	13	10	8	18	59	1·4
10. Old age	9	9	6	11	10	45	1·1
11. Influenza	3	8	6	4	3	24	0·6
12. Dysentery	2	8	2	5	2	19	0·5
13. Enteric fever	1	3	5	4	2	15	0·4
14. Diphtheria	1	4	4	1	1	11	0·3
15. Whooping cough	2	—	1	2	4	9	0·2
16. Measles	1	1	1	1	—	4	0·1
17. Other Causes	231	190	203	222	186	1,032	24·8
TOTAL	957	860	808	821	718	4,164	100·0

Details of the causes of European deaths appear at Appendix C, classified in accordance with the Intermediate List of 150 causes and by sex.

(7) *Maternal Mortality.*

European Maternal Deaths 1942-51.

Cause of Death	Number of Deaths 1951	Number of Deaths 1942-51	Percentage of Total
Puerperal Sepsis	—	16	27·1
Other Accidents of Childbirth	5	14	23·7
Puerperal Albuminuria and Convulsions	4	12	20·4
Puerperal Haemorrhage	1	10	16·9
Accidents of Pregnancy	1	6	10·2
Other Causes	—	1	1·7
TOTAL	11	59	100·0

The maternal mortality rate has increased since 1949, when only two maternal deaths occurred and the rate was 0·6 per 1,000 live births. Attention has been drawn in earlier reports to the high rate experienced in domiciliary confinements as compared with institutional practice. Of the eleven maternal deaths in 1951, five were of mothers confined in maternity homes where, with 3,610 live births, a rate of 1·4 per 1,000 live births occurred. The remaining six maternal deaths were of mothers confined in their homes where, with 319 live births, a maternal mortality rate of 18·8 per 1,000 live births was experienced. The maternal mortality rate in domiciliary practice has doubled since 1950. In 1951, 91·9 per cent. of all European births took place in maternity homes.

The information available on vital statistics in the Coloured and Asiatic groups of the population applies to numbers too small to warrant detailed analysis. The African population vital statistics available are, unfortunately, too incomplete to warrant publication and discussion.

CHAPTER II : INFECTIOUS AND COMMUNICABLE DISEASES.

(1) *Notification of Infectious Disease.*

The notification of infectious disease has much improved, largely as the result of the efforts made by medical officers of health in urban areas and the regional medical officers of health elsewhere. African personal nomenclature is such a changing thing, that it requires a great deal of patient research to prevent double notifications and relating of deaths reported to cases already notified.

Disease	European		Non-European	
	Cases	Deaths	Cases	Deaths
<i>1. Convention Diseases:</i>				
*Cholera	—	—	—	—
*Plague	—	—	—	—
*Smallpox	1	—	1,269	106
*Typhus Fever (exanthematous) ..	—	—	—	—
*Yellow Fever	—	—	—	—
<i>2. Tuberculosis and Silicosis:</i>				
*Pulmonary Tuberculosis	23	1	724	205
*Non-pulmonary Tuberculosis	11	2	205	65
*Silicosis	—	—	11	1
*Silicosis with active Tuberculosis ..	—	—	13	5
<i>3. Infectious Diseases of Childhood:</i>				
*Chickenpox	667	—	1,038	1
German Measles	4	—	—	—
Measles	35	—	80	1
Mumps	38	—	109	1
Whooping Cough	5	—	28	1
<i>4. Virus Encephalitis Group:</i>				
*Acute anterior Poliomyelitis (including Polio-encephalitis)	99	12	69	2
<i>5. Bacterial Infections:</i>				
*Anthrax	—	—	5	—
*Scarlet Fever	98	—	1	—
*Erysipelas	1	—	3	—
*Puerperal Septicaemia	—	—	12	11
*Cerebro-spinal Meningitis	18	4	667	113
Meningitis—other organisms	—	—	7	5
*Diphtheria	23	3	134	15
*Typhoid Fever	30	1	269	35
*Paratyphoid Fevers	1	—	3	—
<i>6. Miscellaneous:</i>				
Relapsing Fever (tick-borne)	—	—	10	—
Tick Typhus	2	—	1	—
Traehoma	—	—	326	—
*Trypanosomiasis	—	—	9	1
*Undulant Fever	2	—	1	—
*Rabies	1	1	—	—

*Indicates diseases which are notifiable infectious diseases under the Public Health Act.

(2) *Malaria and Blackwater Fever.*

The position during the 1950-51 rainy season was generally satisfactory and the distribution of the rains did not favour a long malaria season. Malaria admissions to Government hospitals of Europeans and Africans was down by one-third as compared with the previous year. The malaria deaths registered of Europeans totalled 16, which means that 12 died of their illnesses outside hospital. The hospital case mortality rate in Europeans at 0.45 per cent. can be considered satisfactory. A few cases of blackwater fever are still being admitted to hospitals and there was one European death from this cause in 1951. In September, the Mazoe Valley Project of combined control of malaria and bilharzia financed by the State Lottery Trustees,

came to an end. The various communities living in this valley made arrangements to continue malaria control by the use of B.H.C. residual insecticides on a co-operative basis. The bulk of this work was undertaken by a commercial firm on contract.

In other rural areas of the Colony and notably near Bulawayo, local bodies have undertaken residual spraying on a co-operative basis with good effect.

The method of combined control of malaria and bilharziasis by a unit working throughout the year, which was worked out and tested in the Mazoe Valley Project, was transferred to apply the same measures to a large group of 14 Native Reserves to the north and east of Salisbury.

Five control teams are now in operation and protecting 200,000 people. The Native Councils in each of these areas are making a substantial voluntary contribution to the cost and have shown by their co-operation and help how much the protection from malaria (and, of course, a host of other domestic insect pests) has been appreciated. This same spirit of interest and self-help has also been evident in many other areas where Native Councils have raised funds and undertaken residual spraying on a communal basis.

There have been anxieties concerning the malaria position in resettled African communities. These people have to move from their old homes after gathering their harvests and be settled in with houses built and lands ready for cultivation, before the onset of the rains. The difficulties which have arisen in giving these people residual insecticide protection in their new villages, are that access by road is often difficult and in many cases the interior wall finish of the house is not complete. Despite these difficulties, there is no doubt that the resettled communities have been saved from a heavy burden of malaria.

(3) *Bilharziasis.*

Increasing use has been made of Miracil D Hydrochloride (now called lucanthone hydrochloride B.P. 1951) in the treatment of this disease and nearly 86 kilogrammes of the drug were issued from Medical Stores in 0.5 gramme tablets, enough to treat over 20,000 cases. A number of small clinical trials with the different batches of the drug received, have shown that it fulfils its early promise and is the speediest, simplest and most effective drug available for the treatment of urinary bilharziasis. Apart from cases being treated in hospitals and other institutions, it is being used to a greater extent on mines and farms, where employers of labour find the method quick and effective though rather expensive. Despite this, the improvement in health and ability to work far outweighs the expense, particularly when the more permanent groups of labour employed are treated. Trials with an oral antimony preparation have been very disappointing despite glowing accounts of their value in other areas.

The Research Laboratory prepared and issued 21,750 doses of cercarial antigen for use in diagnosis by medical practitioners within the Colony, and 5,850 doses to workers elsewhere in Africa and in South America, for experimental purposes. As the South African Institute for Medical Research is now to make cercarial antigen for sale, demands on our laboratory by users outside the Colony should fall away. The value of this method of diagnosis, particularly in the more obscure cases, is fairly well accepted. As a "negative screen," it is particularly valuable in saving time in diagnosis when large numbers of persons have to be examined.

Large scale urine surveys of a number of Native Reserves to the north of Salisbury were carried out in preparation for the malaria and bilharziasis control scheme, which will go into operation in these areas for bilharziasis control in 1952. Surveys are made of children up to 16 years of age, as it has been found that in old people, the infection is generally of long standing and in view of the tissue damage to the bladder, it is increasingly difficult to find eggs in the urine. A single specimen of urine, taken after exercise, was examined by macroscopic methods for eggs, a proportion of each group being also examined microscopically. Over 10,000 specimens were examined and showed that both boys and girls were heavily infected and the proportion infected rose steeply in the older age groups. In two big reserves, the children sampled at the age of 12-16 years were found 100 per cent. infected.

Copper sulphate continued to be employed as a molluscicide.

In the final months of the Mazoe Valley Health Project, which came to an end in September, 1951, four control teams completed the treatment of streams in the lower third of the Mazoe Valley. After survey and checking, the few places where vector snails were found were given further treatment. For a number of years, issues of copper sulphate have been made free of charge to any landowner prepared to apply the material in the approved manner and at the right time for maximum effect. In view of the rising cost of copper sulphate and the ineffective use being made of the chemical, it has now been decided to restrict free issues to local health authorities, to the health staff of the department and to those groups of landowners in a water catchment area, who were prepared to co-operate to treat their streams at one time and in close adherence to the methods advised. Naturally the bulk of the material will now be applied by the Malaria and Bilharzia Control Teams operating in Native Reserves.

During 1951, a total of nearly 17 tons of copper sulphate were used as a molluscicide, 9 $\frac{3}{4}$ tons in the Mazoe Valley Health Project, 1,200 lbs. by local health authorities and 6 $\frac{1}{2}$ tons by Government Health Inspectors and members of the public treating their own streams and dams.

The Public Relations Department have prepared and completed a documentary film describing the operations of combined control of malaria and bilharziasis by a team. The film is designed to encourage communities to co-operate in this work. Further information on this subject will be found in Appendix O.

(4) *Tuberculosis.*

This disease continues to cause much anxiety and it is therefore surprising that the cases notified in 1951 do not show such a big increase over the 1950 figures, as was expected. As far as European cases are concerned, there is no doubt that the insistence that every person, seeking to enter the Colony for permanent residence, shall have a radiologist's report on X-rays of his chest (and on X-rays of all accompanying dependants over three years of age) has had a deterrent effect on the wholesale immigration of persons suffering from pulmonary tuberculosis, apparently in the belief that the sunshine of this Colony would cure them of their disease. This X-ray screening of immigrants, which is advised to be done at the country of origin, was in the earlier months of the regulations delayed by some until their arrival in the Colony. A few cases were found who claimed that pulmonary tuberculosis had not been suspected by them.

As a result, the special accommodation for European cases at the tuberculosis block in Salisbury, has proved barely adequate.

The Martin Sanatorium in the Chindamora Reserve near Salisbury, is now treating selected African cases.

Selection is on the grounds of the state of local lesions and of a general condition which may be expected to benefit from such treatment as is available at this institution. The death rate experienced indicates that something can be done for Africans suffering from these types of pulmonary tuberculosis, albeit at very heavy expense in antibiotics and other drugs.

It is admitted that notifications of pulmonary tuberculosis in Africans is far from complete and on the recorded notifications, the attack rate is 16·6 per 100,000 in Europeans and only twice this amount, 36 per 100,000 in Africans. The incidence in Africans is probably much higher.

A beginning has been made at Bulawayo in B.C.G. vaccination of groups of persons liable to be exposed to heavy infection, nurses, student nurses, etc., and also a group of African school children aged from five to 18 years. A Mantoux survey using 1 : 5,000 O.T. (0·02 mg.) showed a close parallel to the figures obtained in a survey at the same African School in 1950. It is interesting to note that 15 out of 217 children tested on both occasions had become Mantoux positive in 1951. The time taken to transport liquid B.C.G. from Copenhagen by air, allows little leeway in the arrangements for vaccination, but the preliminary results are uniformly good, indicating there has been no deterioration during the time of delivery of the material. The effort to control pulmonary tuberculosis in the Africans is thus being attempted along a number of lines. Firstly, by means of special hospitals or sanatoria, where those cases which will benefit from antibiotic and chemotherapeutic measures are treated. A start has been made on the construction of a second institution at Bulawayo to serve Matabeleland. Secondly, the possibility of protecting persons at high risk, hospital orderlies, nurses and the like is being investigated and also the possibility of B.C.G. vaccinating newly born infants at the African maternity hospitals. The silicosis scheme with its weighing checks, medical examinations and radiographic investigations can also be expected to help to reduce the number of advanced cases coming from the mining industry and remove early silicosis cases from further risk at an early stage of the disease. Finally, there is the big problem of the African infected with pulmonary tuberculosis whose ultimate prognosis is gloomy but who, before the fatal issue, may serve to infect many others especially in the family group. The disposal of this group presents serious problems. In Native clinics where so many eventually come, little can be done for them and they become homesick. The alternative to the clinic, which is generally already overtaxed with its burden of sick, is to allow the case to go home to die. It has been suggested that village settlements, where the patient could live in a good environment, but not so as inevitably to infect his family, would be an economical and humanitarian solution. If it were possible to enforce this at an early stage, it might help to reduce the risk of infection spreading further than the family group to the village, but there seems little more reason to hope that these patients will be prepared to stay in the settlements, than in the clinics.

(5) *Smallpox.*

This disease continued to affect Southern Rhodesia severely, although the case mortality was not so high as earlier in this epidemic. Most outbreaks were of a local nature and rarely involved more than a few cases each. Once again, very much effort was expended in dealing

with these incidents, including the vaccination of the village contacts. The Government Health Inspectors and their staff did 472,899 vaccinations, 9,329 were performed at Native Department out-stations and 229,004 were done by local health authorities, a total of 711,432 vaccinations, which represents the vaccination of one-third of the total population. Once again, much difficulty was caused by the adherents of certain religious sects, who encouraged the hiding away of cases of smallpox and failed to attend for vaccination. Some exemplary sentences imposed by the Courts on headmen and chiefs caused a great improvement in this regard in some districts.

(6) *Yellow Fever.*

The investigation of the southernmost limits of endemic yellow fever in Africa was continued during 1951. A total of 527 blood specimens were taken, 77 from the neighbourhood of Binga's village on the Zambesi, where one specimen with mouse protection properties was found in 1950; the remainder being taken from the nearest populated areas to the east and south-east of this place, in the Shangani and Lower Gwelo Native Reserves. The results of the examination of these samples of blood have not yet been received.

(7) *Rabies.*

In last year's report a full account was given of the previous history of this disease. During 1951, rabies in animals spread from the south-east to the north and east and a considerable area of the Colony was involved. The Veterinary Department undertook prophylactic inoculation of all dogs in prescribed areas and a total of 229,000 animals were so protected during the year. A number of persons were bitten or had close contact with animals afterwards found to be rabid, so prophylactic injections were given to 54 Europeans and 56 Africans. There were no deaths from rabies of the local population, the only death being a European child admitted from Bechuanaland, where he had been infected by a bite from a rabid dog.

(8) *Leprosy.*

Details of the cases treated in the two leprosy hospitals are given in Table A of the Appendix.

The atmosphere at both hospitals has been completely changed by the new drugs, which give the patients some hope of early cure. The discipline and behaviour of patients has shown a marked improvement since the previous year, when at Ngomahuru the situation at one time was very difficult. Improved recreational facilities have done much to make the inmates happier and the school established at Mtemwa last year has been a great success. Over 100 children attend, and at their own request the teacher is conducting a night school at which 90 adult patients attend.

All patients who can benefit from the treatment are now on sulphones. All lepromatous cases at Mtemwa and about 420 patients at Ngomohuru are under treatment with sulphetrone and the results are very encouraging, nodules subside progressively, laryngeal lesions are arrested and eye lesions are much reduced. At Ngomohuru all new admissions of this type are treated with D.A.D.P.S. The dosage has been decreased from 300 mg. to 200 mg. a day and this dosage appears to be just as effective as the former scheme. Since the change over, no dermatitis has been observed and the incidence of severe anaemia has much decreased. The other toxic reactions, psychosis, fever and erythema nodosum leprosum have not been seen. The standard dose scheme now is to give one tablet (100 mg.) a day for six days a week for six weeks and thereafter two tablets (200 mg.) a day for six days in each week. Lepromatous cases have almost without exception shown a marked clinical and subjective improvement, although organisms can still be recovered in some of the more severe cases even after two years of sulphone treatment. At Mtemwa, moogrol injections are still used in the straight-forward neural cases as a commencing treatment. The treatment of neurotrophic ulcers is disappointing, especially when *Ps. pyocyaneus* is present. Scraping of ulcerations, removal of dead bone and courses of penicillin do relieve, but improvement is often slow. However, until these patients can be educated to keep their ulcers and dressings clean and until there is enough hospital bed space to allow ulcer cases to be kept under control for long periods, progress with this tragic and disheartening group must be slow.

A classification of 1,000 cases at Ngomohuru at the end of 1951 is of some interest:

<i>Neural Cases:</i>	Early (N1)	305	
	Moderately advanced (N2)	144	
	Advanced (N3)	10	Total 459.
<i>Lepromatous Cases:</i>	Early (L1)	366	
	Moderately advanced (L2)	164	
	Advanced (L3)	11	Total 541.

Their response to treatment has been as follows:

459 *Neural Cases*.—52 active and not yet responding to treatment, 202 active, but responding to treatment, 169 quiescent and under observation for discharge and, 366 arrested, but retained on compassionate grounds.

541 *Lepromatous Cases*.—39 active and not yet responding to treatment, 443 active, but responding to treatment, 58 quiescent and under observation for discharge, and 1 arrested, but retained on compassionate grounds.

The three non-African patients under treatment are making good progress.

At Ngomohuru, there have been a number of Africans from neighbouring territories, entering ostensibly to seek employment, but really to seek treatment for leprosy. Of 214 cases admitted to Ngomohuru during 1951, only 121 were Natives of Southern Rhodesia, the remaining 93 coming from nearby territories. It is interesting to note that the annual death rate of the inhabitants of the two leprosy hospitals is 16·5 per 1,000, which is probably less than the figure for the total African population of the Colony.

Babies born in leper settlements are always a problem. The children are generally illegitimate and homes have to be found for them outside before they reach the age of one year. At Mtemwa, the situation is more satisfactory as they are either sent home to the care of relatives or placed with a nearby mission. The latter method has the further merit of allowing their progress to be observed. In the past four years none of the children at the Mission have developed leprosy. One child, now aged six years, who had been living with relatives, has been admitted this year suffering from neural leprosy.

(9) *Poliomyelitis*.

This disease caused the most anxiety and interest in the Colony during 1951 and the number of cases now reported is the highest recorded. The following table shows the attack rate per 100,000 in Europeans and Africans and the deaths recorded from 1945 to the present year:

European				African		
Year	Cases	Deaths	Attack rate per 100,000	Cases	Deaths	Attack rate per 100,000
1945	8	1	9·9	10	1	0·6
1946	33	1	39·6	18	2	1·1
1947	8	0	8·9	4	1	0·2
1948	15	3	14·6	7	0	0·4
1949	11	1	9·5	5	1	0·3
1950	37	11	28·7	20	2	1·0
1951	99	12	71·7	69	2	3·4

It is probable that the number of cases in Africans is much higher than these figures indicate. These show, however, that the attack rate in the European population is at least twenty times greater than among Africans. It is interesting to note, that over the period 1945-51, the case mortality rate on recorded cases in Africans is just one half the rate in European cases. An attempt was made to divide the notified cases into paretic and non-paretic cases. This probably results in over notification as there is a tendency, in retrospect, to diagnose minor catarrhal illnesses in a family as non-paretic poliomyelitis where a paralytic case has occurred. During the year, there was a total of 80 European cases resulting in 12 deaths, and 52 African cases with two deaths; reported as paretic cases.

By means of a detailed questionnaire, a study was made of the 99 European cases reported during 1951. Fifty-five cases with five deaths were in males, 44 cases and seven deaths in females.

The age distribution of cases was as follows:

Age	Number of Cases	Attack rate 100,000
0—4 years	46	267
5—9 years	19	140
10—19 years	13	75
Over 20 years	21	24

There were two deaths in the under five age group (one at six months and the other at 2½ years); three in the group aged 5-9 years; one aged 10-19 years and six aged over 20 years. The majority of the cases occurred in the Northern Region (58 cases and four deaths), there were 16 cases and two deaths in Western, 14 cases and two deaths in Midlands, 10 cases and four deaths in Eastern and only one case in the South-eastern Region. Forty-nine cases of the total of 58 in Northern Region were reported from the City of Salisbury and its suburbs which gives a local attack rate of 121 per 100,000. The distribution of cases by months, during 1951, departed considerably from the pattern of former years, as the following table shows:

Month	1945-50		1951	
	Cases	Deaths	Cases	Deaths
January	7	1	2	0
February	11	0	1	0
March	16	1	1	0
April	16	2	5	0
May	10	2	15	0
June	4	0	4	0
July	11	6	0	0
August	6	1	8	0
September	7	1	6	2
October	11	1	22	3
November	5	0	18	5
December	8	2	17	2
TOTAL	112	17	99	12

In 1951, over half the cases occurred in the last quarter, whereas in previous years, less than a quarter of the cases were in this quarter of the year. Another feature of the 1951 outbreak, was that multiple cases in families or in the same house were reported, whereas previously only rarely could direct contacts with previous cases be demonstrated. From September to December, there were five instances of familial infection; two children of three years and five months of age within two weeks; a father, mother and two out of four children within a month resulting in the deaths of the father and one of the children; a husband and wife where the husband died and there was a strong suspicion that an abortive non-paretic case occurred in their 16 months old child, immediately prior to the parents' illness; a brother and sister aged three and a half and one and a half years, respectively, where the onset was simultaneous and finally a case in a boy aged seven years, followed a week later by his sister aged one and a half years.

Stool specimens were examined for the presence of virus from 12 paralytic and four non-paralytic cases. There were six positive results in the first group and three out of four non-paralytic specimens were positive.

An attempt was made to determine whether the disease had affected the pre-1946 population more heavily than the new Rhodesians, who had entered the Colony from the United Kingdom or the Union of South Africa since that date. If children born in Southern Rhodesia of new Rhodesian parents are included as "Old Rhodesians," the attack rate of all age groups combined is given below. It must be emphasised that the population figures on which these rates are based are merely estimates.

- "Old Rhodesians" — 63 cases in 80,000 = 79 per 100,000.
- "New Rhodesians" from the United Kingdom — 24 cases in 25,000 = 96 per 100,000.
- "New Rhodesians" from the Union of South Africa — 12 cases in 33,000 = 36 per 100,000.

If, however, children born to new Rhodesians in Southern Rhodesia are included with their parents, the distribution of cases is as follows:

- "Old Rhodesians" 49 cases in 77,500 = 63 per 100,000.
- "New Rhodesians" from the United Kingdom — 36 cases in 26,000 = 138 per 100,000.
- "New Rhodesians" from the Union of South Africa — 14 cases in 34,500 = 40·6 per 100,000.

It must be understood that a number, shown as coming from the Union of South Africa, really originate from the United Kingdom having emigrated in the first instance to the Union of South Africa and later come to Southern Rhodesia.

If adult cases only are considered, there were a total of 21 cases aged 20 years and over. Five cases occurred in old Rhodesians in a population of 50,747, an attack rate of 10 per 100,000, 11 cases occurred in 15,851 "New Rhodesians" from the United Kingdom, an attack rate of 69 per 100,000, and finally five cases occurred in 20,923 "New Rhodesians" from the Union of South Africa, an attack rate of 24 per 100,000.

In the 1951 epidemic, it would seem therefore that Europeans resident in the Colony before 1946 and the African population, were less affected than Europeans who had arrived since 1946. In a number of cases the onset of the disease was associated with severe physical and mental strain and in other cases, with injections.

(10) *Trypanosomiasis*.

This disease continues to contribute 8 to 10 cases each year and there seems little doubt that a number of these are infected in tsetse fly country within Southern Rhodesia in the south side of the Zambesi River Valley, between the Kariba Gorge and the Portuguese Border at Zumbo. At least three infected foci are suspected, to the west near Kariba in the Urungwe Reserve, near the confluence of the Chewore and Zambesi Rivers and in the lower reaches of the Hunyani River north of the southern escarpment of the Zambesi Valley. Mention has been made in previous reports to the frequency of so-called "healthy carrier" cases of this disease. The history of such a case is generally that twelve to eighteen months before becoming ill or being diagnosed, the patient has visited his home in the Zambesi Valley and after a few weeks returned to his employment on a farm or mine in a place known to be free from tsetse fly. Often such cases are not ill at all and have only been diagnosed by the finding of trypanosomes in a blood film taken for some other purpose. It had been hoped to carry out an extensive blood film and clinical survey of the population in this area, but unfortunately as yet funds are not available for this purpose, for which competent staff is available.

The area concerned is one of great economic possibilities to the Colony, as a scheme to dam the Zambesi at Kariba Gorge for hydro-electric and irrigation purposes is now under investigation and it is planned to grow sugar cane in the Zambesi plain lower down. Either of these schemes might be seriously prejudiced if human trypanosomiasis was to become more prevalent.

Reference is made in Appendix O to a strain of trypanosome found in a female patient from the lower Hunyani focus which resembles *T. gambiense* in its behaviour in experimental animals.

CHAPTER III : CURATIVE SERVICES.

(1) *European Hospitals.*

No new hospitals have been opened, but building of a cottage hospital at Filabusi continues. Extensions to existing hospitals have been put into use during the year, but the accommodation for patients in most centres continues to be insufficient. An attempt has been made in the past years to give some idea of the overcrowding which has to take place and the factors set out below illustrate this to some extent:

	1951	1941	1931
General Hospital Admissions	16,620	11,074	5,269
Admission rate per 1,000 of European Population	120·0	159·7	105·6
Average days in hospital each case	10·3	11·6	14·6
Average number of patients per hospital bed	24·2	20·1	15·1
Beds per 1,000 of the population	5·0	7·9	7·0

From these figures, it is obvious that the position regarding hospital accommodation is steadily deteriorating. The situation at some centres, where the development and population increase has been most rapid, is even worse.

If the number of beds in hospitals is related to the average in-patient population, taking the hospitals together, 70 per cent. of beds are filled all the time. Seven hospitals have more than 20 beds each and five of these are above the average, ranging from Salisbury with 90 per cent. of the beds constantly filled, and followed by Umtali (78 per cent.), Que Que (77·6 per cent.) and Bulawayo (74 per cent.). Both Gatooma and Fort Victoria are well below average, as are all the other smaller hospitals in the Colony, which range down to less than 25 per cent. constantly occupied on an average. There is little hope that new Government construction will alleviate this position for some years to come. The opening of new privately conducted hospitals may do something to relieve the pressure.

The situation in regard to maternity homes does not appear to be any worse than last year and presumably a community, which is able to provide maternity home accommodation for over 90 per cent. of its births, cannot really complain, although attention has been drawn to the high maternal mortality in domiciliary maternity practice.

The following figures give some indication of the pressure on and bed situation, in maternity homes:

	1951	1950	1949	1948	1947
Percentage of births taking place in maternity homes	91·9	93·0	91·9	88·7	88·8
Number of maternity beds	165	140	125	123	133
Beds per 1,000 live births	42	41	39	43	50
Average number of confinements per bed ..	21·8	22·7	23·6	20·7	17·9

One new private maternity home came into operation during the year in Salisbury and made a very welcome relief to the position at the most overcrowded centre. Statistical material concerning European General Hospitals will be found in Tables D to F and the maternity home figures in Table H of the Appendix.

(2) *District Nursing Service.*

There are now 14 District Nurses on the Staff. The appointment of District Nurse, Headlands, was withdrawn during the year because of lack of support by the local population using her services. Later, a further appointment was made, but the work done by the nurse in this area still hardly justifies continuing the appointment. A new appointment has been a District Nurse at Odzi and in this area the use made of her services is increasing satisfactorily. Only four of the nurses are on the permanent staff, the remainder being married women, most of whom are resident in the area they serve. This method causes some dislocation when husbands are transferred, but it solves the housing problem for the nurse.

The work done by the staff during 1951 can be summarised as follows:

Number of homes visited	1,145
Number of home visits paid	9,157
Visits of patients to nurse	2,865
Midwifery cases	26
Vaccinations	185
Number of African out-patients treated	15,099

A most disappointing feature of district nursing work has been the failure on the part of the public in making use of the domiciliary midwifery service, which was one of the chief reasons for the starting of the District Nursing Service in 1938.

Another disappointment has been the lack of support given by the public to infant and child welfare centres which District Nurses have endeavoured to maintain.

(3) *Coloured and Asiatic Hospitals.*

Until 1950, no separate record was published regarding the hospitals for these sections of the community and the data was included in the information given on African Hospitals.

As new hospitals for these communities will be in operation in the coming year and as improved accommodation becomes possible, a statement of the position may be of use. At many of the smaller centres, Coloured and Asiatic patients are admitted in an emergency into a side ward in an African hospital, but generally, such cases are transferred to the special blocks provided in conjunction with the hospitals at the larger centres. The existing provision of beds allows these communities 9·8 beds per 1,000 of the population, nearly double the European provision. Only 47 per cent. of the beds provided can be said to be in continual occupation, whereas, on the same calculation, 70 per cent. of the European beds are occupied.

There is a need for maternity home facilities for these communities, which will only be well provided for at Salisbury when the new hospital is in commission. Elsewhere the situation is not yet satisfactory.

The details of these hospitals appear in Tables D to F in the Appendix.

(4) *Mental Disease.*

The situation at the Ingutsheni Hospital, Bulawayo, is more satisfactory, but the steady rise in the patient population seems to continue.

During 1951, 110 European, 7 Coloured and Asiatic and 354 African patients were admitted, a total of 471. Patients discharged recovered numbered 301, not recovered 9 and there were 115 deaths. Thirty-one voluntary patients, 29 European and 2 African, were admitted during the year and all were discharged recovered save one patient remaining in hospital at the end of the year.

A number of patients were given leave on probation and of 116, 83 have now been discharged recovered.

Improvements in buildings at the hospital and very necessary extensions have made slow progress. A new laundry has been completed but has not been brought into use owing to staffing difficulties. The hospital's farming activities were not as successful as usual because of the low and patchy rainfall. Nevertheless, the farm produce used in the hospital was valued at over £2,300.

(5) *Native Hospitals.*

Work on new African hospitals at Salisbury and Bulawayo continues, but it has not been possible to open any further patient accommodation. A fair amount of work has, however, gone into the construction of staff accommodation, out-patient departments, mortuaries and boiler houses. The work of constructing the main five-storey ward blocks should begin in the coming year. The hospital at Rusapi is in the process of being rebuilt. Otherwise temporary additions and alterations only have been possible. The gross overcrowding of most African hospitals continues as the following figures demonstrate:

	1951	1941	1931
Number of beds for which hospitals were designed	1,480	854	556
Patients admitted	62,336	25,636	7,162
Average stay of patients in days	11·5	13·3	24·0
Daily average in-patient population	1,963	875	472

The tuberculosis sanatorium in the Chindamora Reserve is now in full operation and has now been wholeheartedly welcomed by the Africans as an acceptable place of treatment. At first, it was feared that this institution might be held by the Africans to be a place where incurable patients were sent to die, but by selection of patients, those most likely to benefit, are given every opportunity of fighting their infection. Twenty-two deaths in 174 patients treated can be considered a reasonably good result.

The maternity hospitals at Salisbury and Bulawayo have proved to be very successful and popular, and the African female has shown an ever increasing appreciation of ante-natal care. About two-thirds of the cases admitted are booked, generally about six weeks before delivery, although a number come along very early in the pregnancy to attend the ante-natal clinics.

The post-natal clinics are also well attended, and at one hospital 54 per cent. of mothers attended. Multiple pregnancies appear to be very common, there being about one twin birth in every 30 confinements and triplets once in every 935 confinements. Forceps were applied on 53 occasions, an incidence of 2·9 per cent., chiefly because of delay in the second stage due to occipito-posterior positions. Caesarean section was performed on 29 occasions, 19 classical sections and the remainder lower segment operations. The maternal mortality from obstetric causes was 11 deaths, which gives a mortality rate of 6·5 per 1,000 live births.

Premature baby units have been instituted as it has been found that the prematurity rate in Africans is high, being 20 per cent. of all births where 5½ lbs. the international standard of prematurity, is accepted. In view of the pressure of numbers, a provisional prematurity weight at 5 lbs. was accepted and even at this weight, 15 per cent. of all births are deemed to be premature. Cases of pre-eclamptic toxæmia and eclampsia are few in number. In fact, there were only five cases of eclampsia in two years work at one hospital, but the mortality is very high. A blood bank, established by the Red Cross Society, has been of inestimable value, and with ante-natal care, form the two principal factors in improvement in the conduct of the African maternity services.

(6) *Native Clinics.*

Much interest has been shown from overseas in this type of medical service for the African, which supplies a good service to rural populations at the least possible expense. By a standard design, capable of extension by additional units, building costs have been kept as low as possible and equipment and furnishings while adequate, are of a simple type.

Only two new clinics were put into operation and one at Fort Usher was closed down, a net gain of only one. Despite great building difficulties, development was not at a standstill and a great deal of work has been done to improve existing clinics generally, by providing better staff accommodation, improved water supplies and sanitary facilities. The in-patient accommodation in Government Native Clinics is now 3,715 beds.

The work done at this type of institution has shown a remarkable increase over the past 20 years:

	1951	1941	1931
Number of Clinics	85	53	8
In-patients treated	134,207	45,948	4,775
Out-patients treated	343,803	109,148	(a)
	(a) Not known.		

The rate of increase in the work of Native Clinics has been steady for some years and 1950 showed an increase of 18 per cent. over 1949. The 1951 figures for admissions show only a five per cent. increase over the 1950 figures. This slackening is due not only to the fact that fewer new institutions were put into service, but also because existing clinics cannot physically accommodate any more people. These institutions are designed to accommodate 3,715 patients, but in 1951 had an average daily in-patient population of 6,470. The fall in admissions of venereal disease noted last year has continued, though this has been balanced to some degree by an increase in out-patients treated for these conditions. The widespread use of oily penicillin preparations has enabled many more patients to be treated for venereal disease as out-patients in rural areas. The statistics in regard to Native clinics appear in Table B of the Appendix.

(7) *Medical Store.*

A start was made with the building of a modern, specially designed store on the new Harari African Hospital Site. When this is brought into use, the service of the Store will be greatly increased; at present, stocks of certain equipment are stored in a number of scattered and inadequate buildings. With a larger financial provision stock holdings have been improved, although rising price levels have offset this to some extent. The following figures of purchases and sales will illustrate the rapid development of this service:

	1947	1948	1949	1950	1951
Value of Purchases in £1	112,730	127,350	174,568	207,425	313,183
Value of Sales in £1	105,555	137,350	139,371	176,950	195,306

(8) *Orthopaedic Centre.*

There has been a steady increase in work at this Centre during the year. An increase in the number of patients from territories to the north is noted, patients from even as far afield as Kenya have been served. The staff now pay regular visits to the hospitals at Bulawayo, Gwelo and Umtali with much saving of time for persons at these centres. The services of the Centre are being extended to the repair of hospital and laboratory equipment and much time has been saved by repairs being done within the Colony. The European technical staff

now numbers five. Among the items made and fitted at the Centre during the year were 67 artificial limbs for Africans, 33 spinal supports, 158 caliper and other leg appliances, 174 corsets and belts, 110 artificial limb repairs, 26 trusses and 1,164 other appliances and tasks. There are now 2,676 European and 470 African patients on the books.

(9) *Missions.*

The increase in medical missionary work has continued and a number of missions now have plans to build modern hospitals towards which the Government makes generous grants. Another pleasing feature has been the increase in the number of medical missionaries as a result of the new financial policy for aiding the medical work undertaken by missionary bodies. A summary of the medical work carried out by missions is as follows:

	1951	1941	1931
Number of aided Medical Missions	50	27	(a)
Total admissions	37,482	12,475	(a)
Out-patients treated	244,300	63,486	(a)

(a) No information available.

Government grants-in-aid are made also on a basis of equipped beds in approved buildings. In 1951, the total number of such authorised beds was 852. The total number of beds in Mission Hospitals, however, amounted to 1,099. The details of the work done by medical missions during the year will be found in Table G of the Appendix.

(10) *Mining and Industrial Medical Services.*

The development of these services, which has been a feature of post-war development, continues and the importance of good health and medical services is being more keenly appreciated by the larger industrial and mining enterprises. The smaller mines, however, still lag far behind and it is not surprising that these concerns often languish because of the poor health and lack of welfare facilities for African and European employees.

A number of medical officers have been good enough to supply material for inclusion in the Report, which must only be an indication of what is done, as the information is far from complete. Some of the larger mines and industrial concerns not only provide a first-class medical service for their employees, which is generally made readily available to others living in the neighbourhood, but they conduct their own townships with all services and recreational facilities and also supervise the health of the township area. There is no doubt this is the best arrangement as the management is in the best position to deal with health problems when they occur. Of the concerns listed below, a European hospital service is provided only by the Shabanie Mine, which maintains 16 general and 4 maternity beds primarily for use by their own employees. Similar facilities exist at Wankie Colliery, but no return has been received.

All others send their European patients for admission to the nearest Government hospital.

	1	2	3	4	5	6	7
European Employees	357	401	108	72	51	13	27
African employees	6,000	1,794	1,025	1,028	780	338	690
Beds for African patients	308	34	79	12	30	18	37
African admissions (including dependents and others)	4,666	1,194	825	891	62	(a)	1,460
European out-patient attendances	1,151	1,675	(a)	(a)	1,278	—	75
African out-patient attendances	14,590	5,775	5,206	4,921	3,951	1,438	4,082
Occupational accidents	1,021	2,757	233	109	194	(a)	117

(a) Figures not available.

1. Shabanie Asbestos Mines, Shabani.
2. Riscom Steel Works, Redcliff, Que Que.
3. Globe and Phoenix Gold Mine, Que Que.
4. Connemara Gold Mine, Que Que.
5. Rezende Gold Mine, Penhalonga.
6. Gaika Gold Mine, Que Que.
7. African Chrome Mines, Umvukwes.

(11) *African Medical Services Generally.*

The following table gives details of in-patients treated in Government and State-aided institutions, the number of institutions in each category being shown in brackets:

Type of Hospital	Estimated Beds in 1951	Admissions		
		1951	1941	1931
Native Hospitals (13)	1,480	60,461	25,636	7,162
Mental Hospital (1)	580	354	173	99
Leprosy Hospitals (2)	1,850	485	319	281
Maternity Hospitals (2)	97	4,961	—	—
Tuberculosis Hospital (1)	100	124	—	—
Government Native Clinics (85)	3,715	134,207	45,948	4,775
Medical Missions (50)	1,099	37,482	12,475	(a)
Local Authority Hospitals (6)	378	8,850	(a)	(a)
TOTAL (160)	9,299	246,924	96,868	12,317
Rate per 1,000 Africans	4·6	122·8	70·1	11·5

The admission rate per 1,000 of the African population continues to rise, albeit at a slower rate conditioned mainly by the brake of building difficulties. The provision of beds in State and State-aided hospitals amounts to 4·6 per 1,000. The country must provide accommodation by one means or other for the treatment of the sick and injured, but the limit placed by finance and technical staff is now rapidly being reached. The only hope of keeping costs within bounds is to raise the standard of communal health by better environmental sanitation, and combat the major endemic diseases, so as to improve the situation to a point where the present institutions and those now being planned or under construction can cope with the increase in population. The complete confidence of the African in the advantages of European medicine having now been gained, it remains to seek his confidence in the measures designed for the prevention of disease, a concept which it is difficult to get accepted and welcomed by more educated and civilised communities. The response to such public health measures as anti-malaria spraying and the surprising self-help shown by African Councils and the like, augurs well for the future, but the problem remains a serious one.

(12) *Extracts from District Reports.*

Extracts from reports submitted by Government Medical Officers will serve to illustrate the variety of work and conditions under which they work and what is accomplished often under difficult circumstances.

Government Medical Officer, Antelope, is impressed by how few acutely ill patients come to his clinics and the great popularity of maternity services, which now constitute a major item in the expense of running the Clinics in his district.

Aided Government Medical Officer, Banket, has devised a method of treating venereal diseases in order to save time. Clinically obvious syphilis and gonorrhoea are treated at once with penicillin. The others suspected of suffering from venereal disease, have blood taken for the Wassermann reaction and are given sulphonamides. About 15 per cent. of these show a positive reaction and are given an eight-day course of penicillin. The rest are practically all soft sore and lymphogranuloma and eventually heal under a sulphonamide regime. Ulcerative granuloma seems to be rare, only four cases being seen in over two years, but they are most intractable to treatment. The merits of this method are that much penicillin is saved and less working time is lost. He notes that burns and deficiency diseases are responsible for most of the long in-patient treatments and constitute a heavy financial drain.

Government Medical Officer, Belingwe, is concerned at the serious social problem created by the unwanted chronic invalids, who, if allowed to stay indefinitely in clinics, can soon make these useless and expensive places. Pulmonary tuberculosis and epilepsy, this latter often due to a cysticercosis of the brain, are particularly serious problems in this connection. He notes that the mines in his area are more open to influences to improve health than usual and are very interested in adequate sanitation and in malaria control by residual spraying of insecticides.

Government Medical Officer, Bindura, is of the opinion that chronic brucellosis is much commoner than is generally thought. These patients are generally of a nervous temperament and classify themselves as chronic malarias. Treatment with antrypol has usually a remarkable effect on these cases.

Government Medical Officer, Chipinga, notes that despite the great popularity of clinics for maternity work, cases are still seen who have been up to a week in labour. Chipinga is a growing town, but he feels that unless more care is devoted to the health of the community and housing for the Africans, the township will suffer. In small communities, it is often difficult to pursue legal measures to their logical conclusion. Some of the trading premises are in a state where they should be demolished and replaced.

Government Medical Officer, Concession, notes that lung abscess is seen more commonly than formerly. The usual causal factors, dental extractions and anaesthetics are not seen and he concludes that these may be due to inhalation of vomited "kaffir beer." Diet on farms and mines is good and the need for protein is being met in some cases by "fish farming" on water conservation dams. He is concerned at the possible effect of a sudden increase in protein of different characteristics and its effects on damaged livers. The consumption of sophisticated foods by all Africans who have money, is increasing greatly and tinned meat and fish, condensed milk and tea are now staple diets of all Africans who wish to be considered in the fashion. In time, it would seem that mealie meal will be used exclusively for the manufacture of beer, this at least is a wholesome food. Diphtheria and pertussis inoculations are now routine in his area and there must be few non-immune European children in this area.

Government Medical Officer, Enkeldoorn, remarks that his is a healthy district and most of his work for the European community is attending to the disabilities and diseases accompanying old age. He, too, is impressed and concerned at the serious social problem presented by epileptics crippled and deformed by their burn injuries. He feels they could best be cared for in small colonies, where they could receive palliative treatment and do such work as they were capable of doing. He feels this would be a particularly useful field of work for missions.

Government Medical Officer, Filabusi, is impressed by the amount of foot and leg injuries experienced by African mine workers. These injuries are slow to heal and cause much labour wastage. It is felt that some type of footwear, such as the "Lancashire Clog" would save many of these injuries. He used to consider that no doctor could run a clinic properly unless he had a period of nursing training, because a Government Medical Officer has to be not only doctor to his patients, but nursing supervisor to the African nursing orderlies. Now he feels that a period of handyman training is every bit as essential, because rural clinics must undertake their own minor repairs and maintenance.

Senior Government Medical Officer, Gatooma, describes an interesting and unusual case. An African woman was seen in labour in her second full-term pregnancy. The head was at the vulva covered by an intact hymen with only a pin-hole perforation. A careful examination revealed a second vagina and uterus lying alongside the pregnant one and this had obviously contained the foetus of a year before. He notes the miraculous effects of penicillin in the treatment of yaws cases seen by him on a medical patrol in the Zambesi River Valley. Lesions began to heal in a matter of hours and patients, who had not walked for months, were restored to full function. Penicillin would appear to be the treatment of choice on such mobile medical patrols where continued supervision of patients is impossible.

Government Medical Officer, Gwanda, records a case of dysentery in an African in whose faeces *Balantidium coli* was found. Carbasone, diodoquin and oil of chenopodium were tried but without success.

Government Medical Officer, Hartley, has signed three death certificates for Europeans during the year, the ages of the deceased be 73, 80 and 93 years. This area, not so very many years ago, made a substantial annual contribution to the malaria and blackwater fever mortality of the Colony. He has found Camoquin the drug of choice in the treatment of malaria and equally useful in clearing up the signs and symptoms of chronic malaria. He also pays a tribute to the housing programme for Africans now under way in Hartley. The location used to be a standing disgrace, but modern permanent housing, a piped water supply and aqua-privy sanitation have been provided for 280 Africans. It is planned to spend a further £50,000 over the next three years completely to modernise the African location. The wise step has been taken to recruit a permanent anti-malaria and sanitary squad to supervise the area.

Government Medical Officer, Karoi, reports that apart from malaria, the health of his young European community has been good. Bilharziasis has been the commonest disease in Africans. Venereal disease is increasing rapidly in this district, only recently being opened up, and is no doubt due to the influx of farm labour.

Aided Government Medical Officer, Inyanga, is now treating African cases of tuberculosis in a special wing of his mission hospital. He reports good results with streptomycin and P.A.S., even in severe pulmonary cases. He has treated several cases of tuberculosis peritonitis by laparotomy and the same two drugs with dramatic effect.

Government Medical Officer, Inyati, points out that good medical services and the proper supervision of these, depend greatly in his area on the state of the roads and points out that until reasonable access is guaranteed, there is no point in establishing a permanent medical

centre. The Native Reserves in his district are interested in residual spraying for malaria control in the Queen's Kraal area where there was a malaria epidemic early in the year which at one period caused six deaths each day. Owners of huts numbering 1,200 have raised £64 to undertake spraying at the end of the year.

Government Medical Officer, Mrewa, has begun to get the African women in his district interested in health. The wife of the chief has given great assistance in this venture. Talks are given by him on maternity care, first aid and public health and the class all spend some time as voluntary helpers in the clinic. The knowledge they acquire is of the simplest order, but is already acting as a leaven in their own villages. He remarks on two conditions, which have stood out above all others during the year, whooping cough and its complications, which have been a serious cause of child mortality, and eye infections. It is surprising how unconcerned Africans are about their eyesight or about the pain and discomfort of chronic conjunctivitis.

Government Medical Officer, Mtoko, has been treating a great many cases of bilharziasis. Lucanthone hydrochloride has been used with good effect, although a number of cases are upset by the drug. European patients are generally more seriously upset than Africans. He treated several cases of cancrum oris in young children, which were complicated by destruction of the maxilla and mandible. Penicillin has little effect in stemming the onslaught of this disease. He feels that the severe drought of the previous year has caused a general malnutrition and avitaminosis, which has lowered vitality. This station, close to the borders of the Colony, suffers much from infectious disease introduced by migrants. Smallpox and cerebro-spinal meningitis have been particularly troublesome during the year.

Senior Government Medical Officer, Ndanga, describes a case which is a tribute to the fortitude of the African. A boy about 13 years of age was gored by a bull in the right iliac fossa. He was treated with sulphonamides and penicillin at the nearby clinic and was put on the supplies lorry to be taken back to headquarters for surgical attention. The lorry was held up by impassable roads and torrential rains and reached the hospital seven days later. On arrival (the ninth day after injury), the dressing was covered with mud, and the caecum, part of the ascending colon and part of the ileum was found on the groin. The intestines were matted together but not gangrenous. After preliminary treatment with sulphonamides and antibiotics, the incision made by the bull was extended, the intestines disentangled and the wound closed. The child made an uninterrupted recovery.

Government Medical Officer, Nyamandhlovu, reports progress in anti-malaria control using residual insecticide sprays, which has been continued in both European farming areas and Native Reserves. The farmers co-operate to buy materials and pumps and employ the spraying team. In the Reserves, the Native Council is supporting the campaign and in this area, each cattle dip tank attendant is responsible for seeing that all houses in his area are sprayed by the occupiers at the right time.

Government Medical Officer, Umvukwes, has been undertaking a parasitological survey of his African patients. Three hundred and fifteen out of 660 specimens of urine showed eggs of *B. haematobium* (48 per cent.) and of 371 stool specimens, eggs of bilharzia were found in 52, hookworm eggs in 42, tapeworms in 9. Europeans agree on the necessity of quarantine regulations for the control of infectious disease, providing their own families are not affected. By this disregard, an epidemic of mumps became widespread in the district and was taken to several schools elsewhere in the Colony.

Aided Government Medical Officer, Victoria Falls, examines all migrant labour entering the Colony at this point, seeking work. Only 21 out of 11,862 were rejected on medical grounds and a further 64 were treated before being allowed to proceed.

CHAPTER IV. PREVENTIVE SERVICES.

(1) Laboratories.

The reports of laboratories are reproduced as Appendices L, M, N and O. The numbers of investigations carried out at the routine laboratories are as follows:

	1951	1941	1931
Public Health Laboratory, Salisbury	117,123	42,105	6,518
Hospital Laboratory, Umtali	20,309	—	—
Public Health Laboratory, Bulawayo	94,792	18,649	2,181
Hospital Laboratory, Gwelo	16,108	—	—
Government Analyst's Laboratory	2,162	1,522	596
TOTAL	250,494	62,276	9,295

Unfortunately the Government Pathologist resigned his appointment and has not yet been replaced and much promising work in the field of surgical pathology has been at a standstill.

(2) Schools Medical Service.

A summary of the findings at routine school examinations of European, Coloured and Asiatic Schools is given in Tables I and J of the Appendix. Since it was only possible to examine 192 children in one Government African School, these have been omitted.

The number of schools and the numbers of scholars in each continue to rise at a very rapid rate. There are now 122 European schools with a total enrolment of 25,908 (99 with enrolment of 22,046 are Government schools), 18 schools for Coloured and Asiatic pupils with a total enrolment of 2,935 (12 of these with 1,986 pupils are conducted by Government) and a small group of Government schools operated directly by Government for African pupils. A fixed proportion of all these pupils should be routinely examined each year, but it is obvious that a school staff of four is quite insufficient to cope with this programme. Hence, in 1951, it was essential to call in the assistance of the district Government Medical Officers, who, between them, undertook a large proportion of the duties. Nevertheless, even that expedient left an undue proportion of scholars without medical inspection.

It is therefore necessary to consider how best to solve this administrative problem. The obvious method of appointing more schools medical officers has an equally obvious demerit that there are less than 200 days in the school year when inspections can be done. Therefore, increasing the number of these officers merely results in a larger aggregate of days when they are unable to do their work at all. It is for this reason that a proposition is now being considered to integrate the Schools Medical Service with the Preventive Services, so that the existing Schools Medical Staffs and any new recruits will be available primarily for schools inspections, but also for other routine work in health promotion and the prevention of disease.

Such a scheme would also have the merit that the personnel could be further decentralised, thus concentrating their work and eliminating wasteful transport expenses.

The manner in which the medical examinations were divided in 1951 is shown in the following table:

	Number of Schools Visited	Enrolment of Schools Visited	Children Examined
1. <i>Schools Medical Officers:</i>			
European Schools	35	7,877	5,194
Coloured and Asiatic Schools	11	2,458	1,957
2. <i>Government Medical Officers:</i>			
European Schools	29	5,351	3,306
Coloured and Asiatic Schools	2	84	79

From the above it will be seen that only 8,500 European children out of 25,908 (32·8 per cent.) were examined in 1951 which is a shortfall of nearly 5,000 on what should be expected.

In the case of Coloured and Asiatic Schools, the position was slightly better, in that 2,036 out of 2,935 children (69·0 per cent.) were examined.

The details in the Appendix do not include the results of examination by Government Medical Officers.

During 1951, the Schools Medical Officers were engaged also on a survey of the intelligence quotients of Europeans in the one age group of those born in the year 1939. Of these, 958 were tested individually, using the Termen-Merrill Revision. Four hundred and eighteen other children, referred by schools authorities for various reasons, were also tested, giving a total of 1,376 intelligence tests done during the year.

The results of the special testing of an age group (2,250 children in all, of whom 1,533 have been individually tested during the years 1950 and 1951) show that approximately 13·4 per cent. had an I.Q. below 80.

A comparative table of the work done by Schools Medical Officers during 1951 is as follows:

	1951	1941	1931
European children examined	5,194	4,536	4,930
Coloured and Asiatic children examined	1,957	452	—
African children examined	192	—	—
Unsatisfactory nutrition, per cent.—			
European children	18·0	10·8	(a)
Coloured and Asiatic children	37·7	26·8	(a)
African children	(b)	(a)	(a)
Entrants found unvaccinated—			
European children	133	442	(a)
Coloured and Asiatic children	86	66	(a)
African children	—	(a)	(a)

(a) No information available.

(b) One school only examined.

(3) Government Dental Service.

Recruitment of dental surgeons remains a big problem and until more attractive conditions of service are provided, new recruits will continue to resign as soon as more remunerative offers in private practice are received.

(a) SCHOOLS.

	Mashonaland and Manicaland	Midlands	Matabeleland
Children examined	6,610	4,417	8,239
Children treated	961	592	335
Fillings—			
Temporary teeth	304	241	99
Permanent teeth	936	433	97
Extractions—			
Temporary teeth	683	447	485
Permanent teeth	234	123	50
Other operations	10	2	15
Scalings	11	16	2

(b) UNIFORMED SERVICES.

	Mashonaland and Manicaland			Midlands			Matabeleland		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Extractions	129	37	5	25	—	—	25	17	—
Fillings	201	141	—	78	—	—	73	14	—
Dentures supplied	22	13	—	4	—	—	10	2	—
Dentures repaired	6	8	1	—	—	—	7	—	—
Other operations	191	144	1	24	—	—	18	—	—

(1) B.S.A. Police.

(2) Permanent Staff Corps.

(3) Prison Service.

(c) INDIGENT EUROPEANS AND AFRICANS.

	Mashonaland and Manicaland	Midlands	Matabeleland
Fillings	39	1	51
Extractions	4,974	80	1,470
Dentures supplied	70	—	32
Dentures repaired	23	—	13
Other operations	13	—	30

A small military force was raised for service with the Imperial forces in Malaya. The dental treatment needed for the 118 fit young men examined, gives a good indication of the dental state of a cross-section of the European population. These recruits needed 59 extractions, 107 fillings, 7 new dentures, 3 dentures repaired and 14 other treatments in order to make them conform to military standards of dental fitness.

The demand for dental attention by Africans is increasing greatly and consideration will have soon to be given to training African dental assistants capable of dealing with the ordinary dental procedures.

The increase in the work of the Government Dental Service is demonstrated by comparison with the work done in former years.

	1951	1941	1931
Schools Service—			
Children examined	19,266	10,550	3,075
Children treated	1,888	1,253	1,200
Extractions	2,042	1,941	1,861
Fillings	2,111	1,279	2,498
Other operations	56	7	160
Others—			
Extractions	6,762	935	—
Fillings	507	163	—
New dentures	153	86	—
Dentures repaired	58	14	—
Other operations	421	245	—
Establishment of dental surgeons	6	3	2

In the early years, the number of children treated by the dental surgeons formed a substantial proportion of the number examined by them. Nowadays, private dental practitioners are to be found in many of the smaller towns. The arrangement is, that where there is a dental surgeon practising, no treatment of school children is carried out by the Government Dental Surgeons except in cases where the parents of a child claim to be unable to afford the expense.

The recruiting of dental surgeons remains a serious problem and of four officers recruited within the past eighteen months, only one remains in the Government Service.

Of the establishment of six, the services of two dental surgeons have not been available for nine months of the year.

(4) *Health of the B.S.A. Police.*

The British South Africa Police maintain their satisfactory record of good health and despite increases in number, the number of days lost from duty has remained low. In the table below, light duty has been counted as half a day duty lost.

	Europeans	Africans
Total strength	892	2,107
Number reporting sick	1,125	1,988
Average days lost per case	9.8	7.3
Cases of venereal disease	—	41
Discharged medically unfit	6	12
Deaths	5	5

Members of the Force, by the very nature of their duties which may require them to camp out and patrol in malarious areas, suffer casualties from this disease. Efforts are being made to see that their quarters in the stations are treated with residual insecticide and that they are fully conversant with personal anti-malaria measures. There were only 48 malaria cases in the European members and 376 in the African force compared with the numbers in 1950 of 78 and 438 respectively.

(5) *Military Medical Services.*

Despite an increase in strength, the number of Permanent Staff Corps members reporting sick was only 404 of whom 263 were minor illnesses and injuries needing light duty or excused duty.

The Women's Military and Air Service recorded 121 cases and about half of these were for minor conditions.

The Cadet camp was held at Inkomo and the health of the boys was good, 40 were admitted to the Camp Hospital and 253 cases recorded at the M.I. Room. At the same period, a camp lasting six weeks was also held at Inkomo and attended by 550 young men from the country districts, who are not able to undergo the usual territorial force training because they live too far away from training centres. There were 74 hospital admissions and 472 M.I. Room attendances recorded at this camp.

These camps were followed by the Territorial Force Camps and 29 men were admitted to the Camp Hospital. Medical Inspection Room arrangements were organised by the training units themselves. A full-time military medical officer has now been appointed on the establishment of the Department of Defence, but serving on the staff of the Director of Medical Services.

(6) *Central Government Health Services.*

The rate of development, particularly in the smaller urban and rural areas, has outstripped the ability of the small health staff to deal with even existing commitments. There is no hope of extending the scope of the services given, until the size of the district allotted to each inspector is reduced to more manageable proportions. Sporadic outbreaks of smallpox and the investigation of cases of poliomyelitis, absorbed a large porportion of their time and efforts.

The decentralisation of the health administration was carried a stage further, when a Regional Medical Officer of Health was appointed to the Midlands and the South-Western Regions with his headquarters at Gwelo. This officer supervises the operations of four Government Health Inspectors, who are supported by his advice and help more easily than is possible from headquarters. The Regional Medical Officer of Health also assists with his special advice five Town Management Boards within these regions.

The Western Health Region has a staff of one Regional Medical Officer of Health and four inspectors. The remainder of the Colony is administered in health matters direct from Salisbury. Work has been done to ensure a good standard of housing in newly developed areas, where the township promoter can be held to strict conditions. Some of these newer townships are of a very high standard. By contrast, some of the older peri-urban communities are so badly serviced and built, that there is a definite drift away to better areas. These communities may therefore, in the absence of any local government, relapse into slums unless continued care is taken.

Some of the larger industrial enterprises have set a good example in housing for their African employees, as have some of the more progressive farmers. Mines, however, generally lag far behind. The plea of short working life has been a perennial excuse to stave off any expenditure on improvement in housing for both European and African employees.

There has been a gradual improvement in domestic sanitary arrangements, and septic tank disposal from house closets and aqua privy sanitation for African employees are becoming more common in the smaller urban areas. This development has no doubt been accelerated by the great scarcity of labour for emptying night soil buckets.

Water supplies in the smaller townships are not always satisfactory. With the increases in population, water drawn from boreholes ceases to be adequate and water is drawn from rivers and dams. The supervision of the treatment of water from these sources is inadequate, as the staff operating pumps and other machinery, have little knowledge of the principles and importance of water treatment.

One aspect of health work in which a marked improvement can be recorded, is in the standards of licensed hotels. Licensing courts, by using their powers to refuse a liquor licence, have been able to bring hotels up to good standards of sanitation and cleanliness, which are maintained by hoteliers once their services and premises have been put into good order.

Native health demonstrators employed during the year numbered 16. Some of these have not given satisfactory service due partly to the infrequency of supervision by the Government Health Inspectors. Left to their own devices and the use of their own initiative some either do as little as possible or else use their official position unduly to exploit their fellowmen. There have been difficulties, too, in housing and perhaps a feeling among district administrators, that being a new type of demonstrator they have not been easy to fit into the existing demonstrator services in Native Reserves. Nevertheless, excellent work has been done by many of these auxiliaries.

The following is a summary of the work done by Government Health Inspectors during 1951:

	1951	1941
Vaccinations	491,557	72,600
Diphtheria prophylaxis	1,063	1,383
Inspection of licensed hotels	262	
Investigations of infectious disease	1,627	
Routine inspection of premises	10,902	
Other duties (including sampling)	4,637	—
Prosecutions initiated	101	
Number of Health Inspectors	20	1

There were no Health Inspectors in Government Service in 1931.

(7) *Local Government Health Services.*

It has been a difficult year for the local health authorities, especially the smaller ones, and much development has taken place which may be regretted in years to come.

Experience has shown that temporary expedients in domestic housing and services, particularly sanitary services, have an unpleasant knack of becoming permanent features in town planning. Despite advice offered, a number of smaller townships are growing up in a disorderly manner. There are, however, several notable examples of good layout and design in European, whilst excellent specimens of African urban housing and services are frequently to be seen. The rapid industrial development of some of the smaller townships has placed a heavy responsibility for proper housing for the African labour attracted to these centres. The health staffs employed by the municipalities in 1951 are as follows:

	Full-time Medical Officers	Part-time Medical Officers	Health Inspectors	Health Visitors
Salisbury	4	1	11	4
Bulawayo	2	—	10	4
Gatooma	—	1	1	—
Gwelo	—	1	2	—
Que Que	—	1	1	—
Umtali	—	1	1	—

In addition, trained staffs are maintained for infectious diseases and venereal diseases hospitals by those authorities which have established these facilities. For example, the City of Salisbury, in addition to the categories mentioned above, employs 31 other trained European staff; the City of Bulawayo employs 16.

Only one Town Management Board, Fort Victoria, employs its own qualified health inspector. The other 17 authorities rely on the services of the Government Health Inspector serving the district.

Four of the municipalities have provided information on their activities, which gives some idea of the scope of the services provided for their communities:

	Salisbury	Bulawayo	Gwelo	Gatooma
Estimated European population	27,700	28,000	3,694	1,700
Estimated Coloured and Asiatic population ..	2,620	2,460	318	300
Estimated African population	75,497	65,000	8,344	8,316
Admissions—				
European I.D. Hospital	252	440	81	(b)
Native I.D. Hospital	2,045	1,091	(b)	643
Native V.D. Hospital	2,221	2,850	(b)	(b)
Attendances, Native V.D. Clinics	9,916	36,541	(a)	8,684
New cases of syphilis in Africans	998	2,574	747	144
New cases of gonorrhoea in Africans	1,501	3,567	243	16
Medical examination of Africans in employ- ment	142,251	63,536	2,527	20,690
Cases seen at ante-natal and child welfare clinics (all races)	34,690	14,532	(b)	(b)
Diphtheria immunisation	912	1,786	—	—
Vaccinations	37,952	66,460	5,412	4,375
Visits paid by health visitors	9,868	5,677	(b)	(b)
Inspections by health inspectors	58,594	25,559	(a)	(a)

(a) Figures not available.

(b) No facilities.

(8) *Nutrition Council.*

The Council has continued its work in the face of serious difficulties from lack of field and laboratory staff, but there are indications that some advance in this will soon materialise as a Food Technologist was appointed during the year.

The Council has surveyed a number of important problems:

- (a) The food requirements of the Colony can be met almost entirely from local production if these needs are translated into essential foods selected with regard to the traditional food habits of each race.
- (b) The present ratios of foods locally produced bear little relation to the needs of the majority. For example, one-third of the African population's needs of groundnuts is produced, but these are converted to a large extent into oil, margarine, soap and cattle cake, none of which makes a serious contribution to African nutrition.
- (c) Milk production, if properly used as liquid milk and cheese, would provide adequately for the races traditionally using milk and its products as articles of diet. Extravagant methods of usage, when milk is converted to a great extent to butter, increase the seasonal liquid milk shortage seriously.
- (d) Foods such as tortilla (the unleavened maize bread of Mexico, which is more nutritious than maize meal porridge) and tempe (the fermented soya bean cake of the East Indies) are valuable foods, which can be made from Rhodesian produce. These foods have been in use by two large groups of human beings for many generations and may prove acceptable in this Colony. A great deal of stress has been laid in the past on the conservatism of African diet, but recent trends show that this is a superficial characteristic and depends more on circumstances than on innate desires.
- (e) There has been an increasing drift by employers of labour to the practice of paying a cash equivalent to the ration instead of issuing the ration. The labourer is eager to have more money to spend on white bread, buns, sugar and sweetened mineral waters, while the employer is relieved of the responsibility of obtaining and dispensing the foods laid down in minimum ration scales. Both parties are satisfied, but there is no doubt the nutrition of the African is suffering as a result of this practice.

An interesting side-light on the economics of food production was the investigation of the export of cooked caterpillars to Northern Rhodesia. These large caterpillars, known as "Modora" are found in large numbers in certain forest areas of Matabeleland. The value of the exports amounts to £8,000 per annum. Here is an example of the export of a most valuable protein food in exchange for cash from a country which can ill afford to lose this valuable food.

A ten-minute sound film "Dividends from Diet" has now been produced and released. It is aimed at the employer and stresses the advantages in efficient labour when labourers are properly fed.

(9) *Aviation Health.*

The inclusion of Tanganyika Territory within the "endemic yellow fever area" has occasioned an even closer scrutiny of the disinfecting arrangements of arriving aircraft. There has been an increase in the number of travellers arriving from or through the "endemic yellow fever area" without a valid international certificate; and who have therefore to be placed under observation for the remainder of the quarantine period. If aerodrome authorities were more careful in enforcing quarantine provisions at the first point of disembarkation instead of permitting such people to take onward passage on other routes, the inconveniences and upsets of quarantine control would be diminished. During the year, additional yellow fever inoculation centres were opened at Gwelo and Umtali. There are now four such centres in the Colony and a total of 2,952 persons were dealt with in 1951.

Civilian pilots are examined for "B" licenses by specially trained Government Medical Officers at Salisbury and Bulawayo and 138 were so examined in 1951.

CHAPTER V. ADMINISTRATION AND MISCELLANEOUS.

(1) *Staff (Establishment).*

1. Medical Officers—

<i>At Headquarters</i> (Secretary for Health, 1; Directors of Curative and Preventive Services, 2; Medical Officer of Health, Peri-Urban Areas (Northern) and Executive Officer, Nutritional Council, 1)	4
<i>In Districts</i> (Medical Superintendents, 6; Government Medical Officers, 50; Aided Government Medical Officers, 8; Regional Medical Officers of Health, 2; Schools' Medical Officers, 4)	70
<i>Specialists</i> (Directors of Laboratories, 2; Pathologist, 1; Superintendents and Assistant Superintendents, Mental and Leprosy Institutions, 4; Radiologists, 4; Psychiatrist 1; Ophthalmologist, 1)	13
<i>Resident Medical Officers</i>	17
	<hr/>
	104

2. Dental Surgeons	6
3. Analytical Chemists	5
4. Pharmaceutical Chemists—	
<i>At Headquarters</i>	4
<i>Medical Store</i>	6
<i>At Hospitals, including relief staff</i> (Hospital Secretaries, 18; Dispensers, 3)	21
	<hr/>
	31

Health Inspectors	23
6. Laboratory Professional and Technical Assistants	24
7. Research Laboratory Staff (Professional Officers, 3; Technical Assistants, 4; Medical Entomologist, 1; Anti-Malaria Officers, 5)	13
8. Nursing Staff (Staff Matron, 1; Senior Matrons, 2; Matrons, 26; Sister Tutors, 5; Sisters, 68; Qualified Nurses (General), 264; District Nurses, 16; Student Nurses, 192; Mental Branch: Males — Head Attendants and Charge Nurses, 6; Qualified Nurses, 22; Females — Senior Matron, 1; Matrons, 2; Sisters, 3; Female Mental Nurses, 18; Male Nurse, Ndanga, 1; Schools' Nurses, 2)	629
9. Orthopaedic Technicians	2
10. Radiographers, including Learners	21
11. Masseuses	7
12. Food Technologist	1
13. Dieticians	4
14. Occupational Therapists	2
15. Clerical Staff (Men, 46; Women, 80)	126
16. Other European Staff	75
	<hr/>
TOTAL EUROPEAN ESTABLISHMENT	1,073
NON-EUROPEAN STAFF	1,968

(2) *Nursing Service.*

Nursing staff continues to come and go. The nursing establishment was increased by 60 posts and the actual numbers of permanent staff increased by 71, which indicates some improvement in the position. Ninety-four nurses joined the Service during the year and only 66 resigned. Usually the resignations balance recruitment, or the losses exceed the gains. The principal reason for resignation is, as always, marriage and 8 Sisters and 38 Nurses resigned for this reason during 1951. Only five staff resigned to seek employment elsewhere, which would indicate that the local conditions of service are reasonably attractive.

With the establishment of African maternity hospitals in Salisbury and Bulawayo, African qualified nurses are now employed. Here also the turnover is very high; there were 8 resignations and 4 recruits during the year.

Girls appear interested in taking up nursing as a career and there are now waiting lists at the two nurse training hospitals. Eighty-three joined for training and 60 left, of this latter figure only 27 because they had passed their final examinations. As there are no training

facilities locally for midwifery, nurses after qualification often proceed overseas to obtain their further qualification and experience and some of these return to the Colony to rejoin the Nursing Service.

The comparison of staff establishment and the actual numbers in employment at the end of the years 1950 and 1951, give a general picture of the nursing staff situation.

	Establish- ment 1949-50	Actual Numbers 31.12.50	Establish- ment 1950-51	Actual Numbers 31.12.51
Senior Matrons	2	2	2	2
Matrons	27	26	26	26
Sister Tutors	5	5	5	5
Sisters	58	57	67	61
Qualified Nurses	241	223	259	242
District Nurses	13	12	16	13
School Nurses	2	1	2	2
Religious order Sister	—	—	1	1
Religious order Qualified Nurses ..	—	—	6	6
African Qualified Nurses	—	—	18	16
TOTAL	348	326	402	374
Student Nurses	185	149	192	172
GRAND TOTAL	533	475	594	546

Of the new nursing staff categories shown above, the tuberculosis sanatorium for Africans is staffed by a Sister and three qualified nurses of a religious order and three other religious order qualified nurses supervise three Government Clinics, which are closely associated with mission stations, but are administered and financed not as a mission hospital, but as a Government establishment.

The African qualified nurses are employed in the new African maternity hospitals which were put into service during 1950.

(3) *Medical Council of Southern Rhodesia.*

The numbers on the Registers of the Council at the end of 1951 are as follows, not all necessarily residing and practising in Southern Rhodesia:

	Additions	Total
Medical Practitioners	37	436
Medical Practitioners (temporary registrations)	7	18
Dental Surgeons	8	77
Chemists and Druggists	16	182
Opticians	1	13
Trained Nurses—General	107	1,053
Mental	1	39
Sick Children's	Nil	14
Midwives	83	557
Masseurs and Masseuses	4	27
Radiographers	Nil	6
Medical Laboratory Technicians	Nil	2
Sanitary (Health) Inspectors	2	60
Meat and Other Foods Inspectors	2	50
Native Nursing Orderlies	40	203
Native Health Demonstrators	5	24

The number of medical practitioners shown as registered, includes a number who now reside outside the Colony. It is estimated that 100 doctors on the Register no longer reside in the Colony, 15 are resident but retired from practice and three practise as dentists. This leaves a total of 315 practising doctors in the Colony, which represents one doctor for each 6,851 of the population.

(4) *Training.*(i) *Nursing Training (General Training):*

The following are the results of the examinations held by the Medical Council of Southern Rhodesia during the calendar year 1951:

	Number of Candidates	Number Passed	Number Failed
Preliminary Examinations	47	42	5
Preliminary Examinations (Part I only)	44	36	8
Final Examinations	30	30	Nil

The examinations were held in April, August and December. Thirteen nurses passed the Final Examination with Honours, three of whom were awarded gold medals presented by the local branches of the British Medical Association.

(ii) *Native Nursing Orderlies:*

The results of the Lower and Higher Examinations for Native Nursing Orderlies held in June and December are:

	Number of Candidates	Number Passed	Number Passed Anatomy and Physiology only	Number Passed Nursing and Hygiene only	Failed Number
Lower Exam	83	60	—	2	21
Higher Exam	45	42	—	—	3

(iii) *Native Health Demonstrators:*

An examination for Native Health Demonstrators was held in November, 1951. Five candidates entered and five passed.

(5) *Military Pensions.*

As a number of pensioners are now being granted permanent awards for their disabilities, the number of medical boards conducted by Government Medical Officers is diminishing, the total number being 474 compared with 779 in 1950. Boards on military pensioners were as follows in 1951:

Southern Rhodesia Pensioners—

European	260
Coloured	12
African	7
New claims for pension	9
Pensioner for Northern Rhodesia	1
Pensioners for the Imperial Government	101
Pensioners for the Union of South Africa	80
Pensioners from elsewhere in the Empire	4

TOTAL 474

(6) *St. John Ambulance and Red Cross Associations.*

Both organisations report a very satisfying increase in their activities, both in range and volume. The new headquarters building of the St. John Ambulance Association was opened in February and the increased facilities has resulted in greater enthusiasm and activity.

The Association has continued its training programme and 1,340 certificates were issued, including 769 first-aid certificates. Hours of hospital duty amounted to 12,500 and the six ambulances maintained, conveyed 8,336 patients and travelled a total of 46,035 miles.

The local branch of the British Red Cross Society has 15 detachments and training is carried on actively. A clinic, for rehabilitation after poliomyelitis, has been started at head-

quarters and these facilities for the victims of this disease, have proved most popular. At Luveve, near Bulawayo, the Society has continued its pioneer effort in providing a comprehensive mother and child health service for the Africans living in this Native village.

Both organisations conduct medical comforts depots, whence wheeled chairs, crutches and nursing equipment can be borrowed for use in the home.

The blood transfusion services have been well maintained. In August, the Red Cross Society started an African Blood Bank. A mobile blood-taking unit makes regular visits to senior schools and industrial concerns and in five months 218 pints of blood was banked.

(7) *Habit-forming Drugs.*

Import certificates numbering 91 and 45 export certificates were issued during 1951.

Drugs	Imports in Grammes	Exports in Grammes
Medicinal Opium	2,060	Nil
Opium (in tinctures, extracts and other preparations) .. .	20,641	363
Indian Hemp (in the form of galenicals) .. .	3,572	Nil
Morphine Alkaloid	1,942	50
Diacetyl Morphine (Heroin) Alkaloid .. .	254	Nil
Cocaine Alkaloid	633	135
Methyl Morphine (Codeine) Alkaloid .. .	4,774	298
Ethyl Morphine (Dionine) Alkaloid .. .	Nil	Nil
Pethidine Base	5,205	268
Amidone	78	1

During the year, inspections of premises and the method of storage and accounting for habit-forming drugs have been pursued with satisfactory results in securing adequate control over stocks.

LEPROSY, 1951.

TABLE A.

Institution	Race of Patients	Numbers on Register on 1.1.51	Admissions	Readmitted for Treatment and Returned Absconders	Discharged, Cured or Arrested	Deserted	Died	Number on Register on 31.12.51	Total Treated	Babies Born
Ngomahuru	European	1	2	—	1	—	—	2	3	—
	Coloured	1	—	—	—	—	—	1	1	—
	African	898	214	42	110	31	14	1,099	1,154	21
33										
Mtemwa	African	697	153	76	97	35	15	753	926	26
TOTAL		1,597	369	118	208	66	29	1,856	2,084	47

TABLE B.

GOVERNMENT NATIVE CLINICS, 1951.

Government Medical Officer	Clinic	Admissions		In-patients Units		Deaths		Out-patients		Out-patients Treatments		No. of Beds
		V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Total
Antelope	Antelope	180	1,214	1,394	2,334	14,836	17,170	—	25	25	1,103	7,638
.. ..	Kezi ..	116	582	698	1,872	7,879	9,751	1	7	8	1,081	6,785
Banket	Banket ..	226	1,301	1,527	3,092	9,780	12,872	—	32	32	977	18,300
.. ..	Chinomwe	116	939	1,055	1,355	8,372	9,727	—	14	14	426	8,595
.. ..	Darwendale	92	379	471	2,052	3,433	5,485	—	15	15	133	6,223
.. ..	Belingwe	336	1,865	2,201	3,012	27,610	30,622	—	75	75	562	4,478
.. ..	Shabani ..	—	—	—	—	—	—	—	1,152	10,701	3,911	49,840
.. ..	Madziwa *	90	370	460	1,398	3,184	4,582	—	3	3	417	7,997
.. ..	Mt. Darwin	154	1,078	1,232	3,614	21,926	25,540	1	9	10	504	8,222
.. ..	Fort Usher †	150	83	233	3,733	1,405	5,138	—	1	1	241	2,034
.. ..	Luveve ..	2	927	929	22	10,697	10,719	—	1	1	663	32,418
.. ..	Matobo ..	7	213	220	169	2,877	3,046	—	56	1,974	347	11,310
.. ..	Chipinga	152	1,342	1,494	2,354	18,504	20,858	—	28	2,627	829	13,678
.. ..	Birchenough	124	1,162	1,286	623	11,652	12,275	1	5	6	397	21,150
.. ..	Nyanyadzi	105	1,915	2,020	637	17,235	17,872	—	17	17	1,161	28,843
.. ..	Concession	378	1,445	1,823	5,805	20,050	25,855	1	90	91	366	5,637
.. ..	Rosa ..	86	1,134	1,220	884	7,683	8,567	2	15	17	567	10,380
.. ..	Buhera ..	61	482	543	1,756	9,322	11,078	1	4	5	1,324	18,948
.. ..	Kwenda ..	81	1,396	1,477	787	9,589	10,376	—	10	10	932	15,295
.. ..	Narira ..	196	1,163	1,359	3,823	15,386	19,209	1	1	2	7,702	40,346
.. ..	Range ..	503	7	510	14,365	87	14,452	—	373	3,025	1,886	30,320
.. ..	Essexvale	214	804	1,018	5,785	11,566	17,351	1	24	25	3,780	10,299
.. ..	Filabusi ..	365	2,118	2,483	5,374	30,438	35,812	3	56	59	482	5,048
.. ..	Chibi ..	484	3,055	3,539	13,050	46,083	59,133	1	11	12	—	20,500
.. ..	Matibi ..	723	2,091	2,814	13,313	34,603	47,916	1	6	7	702	7,494
.. ..	Gokwe ..	114	567	681	3,375	20,251	23,626	—	10	10	234	22,071
.. ..	Gwelo	—	—	—	—	—	—	—	—	—	—	—
.. ..	N.V.S.	—	—	—	—	—	—	—	—	—	—	—
.. ..	Hartley ..	146	2,752	2,898	3,806	24,187	27,993	1	63	64	229	9,243
.. ..	Kutama ..	34	729	763	401	4,000	4,401	2	19	21	2,318	19,831
.. ..	Mondoro	192	1,279	1,471	2,330	13,055	15,385	—	7	7	287	35,594
												14,501

Government Medical Officer	Clinic	Admissions			In-patients Units			Deaths			Out-patients			Out-patients Treatments			No. of Beds
		V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	
Inyanga Inyati Karoï Makumbi Marandellas Melsetter Morgenster Mrewa Mtoko Nyamazuwî	Inyanga ..	169	2,239	2,408	3,567	24,373	27,940	—	9	9	263	4,313	4,576	2,171	27,042	29,213	30
	Tsonzo ..	125	1,265	1,390	1,198	11,149	12,347	1	15	16	638	5,227	5,865	3,431	9,271	12,702	24
	Inyati ..	112	762	874	2,892	13,103	15,995	1	49	50	42	1,815	1,857	250	7,241	7,491	48
	Dagamella	61	464	525	2,523	10,998	13,521	—	8	8	313	2,416	2,729	3,991	25,176	29,167	20
	Nkai ..	100	505	605	2,899	9,895	12,794	—	4	4	361	1,545	1,906	3,196	15,559	18,755	20
	Karoï ..	136	1,610	1,746	1,979	16,257	18,236	—	42	42	43	3,806	3,849	110	5,078	5,188	48
	Miami ..	87	551	638	1,032	8,103	9,135	—	8	8	64	2,347	2,411	139	6,407	6,546	20
	Urungwe	45	597	642	1,190	7,680	8,870	—	7	7	70	3,274	3,344	322	6,929	7,251	48
	Makumbi	390	2,462	2,852	4,703	46,831	51,534	—	58	58	945	10,069	11,014	4,679	51,007	55,686	60
	Marandellas	483	2,643	3,126	13,153	35,693	48,846	1	120	121	162	4,386	4,548	335	18,925	19,260	96
Ndanga	Shiota ..	142	776	918	7,007	13,402	20,409	—	22	22	132	5,722	5,854	334	9,827	10,161	48
	Wedza ..	185	976	1,161	5,308	24,480	29,788	1	20	21	216	6,627	6,843	424	9,439	9,863	48
	Melsetter	56	458	514	631	4,689	5,320	—	5	5	133	2,085	2,218	874	10,906	11,780	—
	Biri Wirî	68	491	559	1,147	7,426	8,573	1	6	7	113	1,371	1,484	515	5,167	5,682	48
	Jena† ..	131	718	849	2,000	10,882	12,882	1	8	9	188	3,798	3,986	4,835	28,099	32,934	48
	Mrewa ..	165	1,741	1,906	1,852	12,655	14,507	—	40	40	284	11,824	12,108	496	24,119	24,615	60
	Mtoko ..	264	3,340	3,604	6,498	55,021	61,519	—	60	60	1,140	6,610	7,750	4,631	24,998	29,629	96
	Nyamazuwî	134	1,848	1,982	3,034	16,862	19,896	—	5	5	385	4,881	5,266	824	10,175	10,999	36
	Ndanga ..	409	9,343	9,752	6,649	137,009	143,658	2	143	145	—	—	—	—	—	1,673	96
	Bikita ..	62	5,223	5,285	2,132	111,622	113,754	—	57	57	—	—	—	—	—	6,177	60
Norton Nyamandhlovu	Chichidza	138	3,219	3,357	5,799	96,780	102,579	—	30	30	—	—	—	—	—	2,814	60
	Chiduma	28	890	918	1,045	72,481	73,526	—	5	5	—	—	—	—	—	726	40
	Chikuku ..	80	2,309	2,389	3,360	66,456	69,816	2	34	36	—	—	—	—	—	5,187	50
	Chingombe	232	6,190	6,422	5,669	119,370	125,039	—	35	35	—	—	—	—	—	15,628	100
	Chitando	215	3,868	4,083	7,147	80,668	87,815	2	25	27	—	—	—	—	—	7,591	50
	Matsai ..	125	3,540	3,665	4,352	106,999	111,351	1	34	35	—	—	—	—	—	1,876	40
	Sangwe ..	42	2,415	2,457	2,106	138,992	141,098	—	20	20	—	—	—	—	—	1,036	40
	Siyawarewa	102	4,821	4,923	2,713	136,464	139,177	1	34	35	—	—	—	—	—	2,889	50
	Ndanga Group (10)	1,433	41,818	43,251	40,972	1,066,841	1,107,813	8	417	425	—	—	—	—	—	45,597	586
	Norton ..	242	1,438	1,680	8,352	15,024	23,376	—	34	34	24	4,300	4,324	128	24,770	24,898	36
Nyamandhlovu	Nyamand- hlovu ..	153	833	986	1,899	10,049	11,948	—	24	24	69	821	890	336	4,517	4,853	48
	Lupani ..	50	290	340	753	2,114	2,867	1	11	12	45	1,051	1,096	126	3,194	3,320	4
	Sipepa ..	79	391	470	2,909	8,841	11,750	—	8	8	688	2,804	3,492	2,477	6,533	9,010	36
	Tjolotjo ..	178	718	896	3,933	8,844	12,777	1	9	10	361	2,072	2,433	922	10,100	11,022	36

TABLE B (cont.).

GOVERNMENT NATIVE CLINICS, 1951.

Government Medical Officer	Clinic	Admissions			In-patient Units			Deaths			Out-patients			Out-patients Treatments			No. of Beds
		V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	
Plumtree	Plumtree	152	1,195	1,347	1,074	11,822	12,896	1	45	46	326	3,166	3,492	826	8,607	9,433	48
	Lady Mary Baring	28	114	142	850	2,122	2,972	2	—	2	201	1,098	1,299	1,157	11,607	12,764	10
	Mphoengs	107	491	598	1,297	5,643	6,940	—	1	1	271	1,622	1,893	813	4,617	5,430	30
	Stanley ..	44	267	311	402	4,874	5,276	—	1	1	163	1,620	1,783	1,055	8,676	9,731	6
	Loretto ..	294	2,092	2,386	5,021	18,570	23,591	2	15	17	525	10,908	11,433	7,500	32,724	40,224	48
Que Que	Chiduku ..	18	288	306	749	6,144	6,893	—	4	4	122	1,719	1,841	718	17,068	17,786	15
	Makoni §	38	511	549	388	4,724	5,122	—	4	4	230	3,951	4,181	1,864	25,600	27,464	48
	Nedewedzo	91	1,479	1,570	2,328	14,485	16,813	1	12	13	96	5,838	5,934	792	20,056	20,848	48
Salisbury	Highfield	—	929	929	—	9,262	9,262	—	8	8	280	10,897	11,177	2,164	50,681	52,845	32
Selukwe	Selukwe ..	—	1,264	1,264	—	13,591	13,591	—	48	48	106	5,368	5,474	269	12,344	12,613	24
Umtali	Dzwamabande ..	266	1,852	2,118	6,254	12,168	18,422	3	32	35	185	5,839	6,024	669	16,377	17,046	48
	Sebanga ..	169	—	169	6,831	—	6,831	3	—	3	152	—	152	473	—	473	48
	Mabedzenge	—	—	—	—	—	—	—	—	—	—	4,394	4,394	—	6,795	6,795	—
	Maranke	43	462	505	582	5,680	6,262	—	5	5	139	2,424	2,563	1,540	6,454	7,994	48
	Odzi ..	219	961	1,180	6,364	13,531	19,895	—	13	13	136	2,487	2,623	777	13,704	14,481	48
Umvukwes	Arrowan	90	824	914	1,174	9,283	10,457	—	40	40	44	1,628	1,672	129	6,845	6,974	24
	Sipolilo ..	41	959	1,000	624	13,207	13,831	—	11	11	32	3,473	3,505	121	17,894	18,015	30
Umvuma	Umvuma	118	1,566	1,684	6,033	20,094	26,127	—	41	41	145	3,276	3,421	362	6,426	6,788	48
	Chilimanzi	84	1,274	1,358	3,238	16,857	20,095	2	17	19	25	2,217	2,242	230	17,319	17,549	48
Victoria Falls ..	Chinyika	45	1,336	1,381	1,158	15,077	16,235	—	11	11	11	7,795	7,806	61	16,067	16,128	15
	Gutu ..	132	2,151	2,283	5,721	33,340	39,061	1	41	42	11	4,058	4,069	440	16,916	17,356	48
	Victoria Falls	—	—	—	—	—	—	—	—	—	—	1,788	1,788	—	10,990	10,990	—
	Falls ..	196	276	472	3,475	7,990	11,465	—	12	12	18	964	982	175	1,385	1,560	48
Wankie	Lukosi ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	(85)	12,590	121,617	134,207	276,115	2,085,366	2,361,481	48	1,898	1,946	19,126	324,677	343,803	91,242	1,113,088	1,269,927	3,715

* Opened 18th April, 1951.

† Closed down 30th June, 1951.

‡ Supervised by a Missionary Doctor.

§ Opened 1st July, 1951.

TABLE C.

CLASSIFICATION OF EUROPEAN DEATHS, 1951.

Deaths Classified according to the International Statistical Classification of Diseases, Injuries and Causes of Death: Sixth Decennial Revision; Intermediate List.

<i>Inter- national List No.</i>	<i>Cause of Death</i>	<i>Number of Deaths</i>		
		<i>Male</i>	<i>Female</i>	<i>Total</i>
A 1	Tuberculosis of respiratory system	3	3	6
A 2	Tuberculosis of meninges and central nervous system ..	2	—	2
A 9	General paralysis of insane	1	—	1
A 10	All other syphilis	3	—	3
A 12	Typhoid fever	—	1	1
A 13	Paratyphoid fever and other Salmonella infections ..	—	1	1
A 16	Dysentery, all forms	2	—	2
A 20	Septicaemia and pyaemia	1	—	1
A 21	Diphtheria	1	—	1
A 22	Whooping cough	—	2	2
A 23	Meningococcal infections	2	2	4
A 28	Acute poliomyelitis	6	6	12
A 29	Acute infectious encephalitis	—	—	1
A 32	Measles	1	—	1
A 34	Infectious hepatitis	—	1	1
A 35	Rabies	1	—	1
A 37	Blackwater fever	1	—	1
	Other and unspecified malaria	14	2	16
A 38	Schistosomiasis	1	1	2
A 43	All other diseases classified as infective and parasitic ..	—	1	1
A 44	Malignant neoplasm of buccal cavity and pharynx ..	4	2	6
A 45	Malignant neoplasm of oesophagus	3	1	4
A 46	Malignant neoplasm of stomach	19	5	24
A 47	Malignant neoplasm of intestine, except rectum	11	9	20
A 48	Malignant neoplasm of rectum	4	1	5
A 50	Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	14	2	16
A 51	Malignant neoplasm of breast	—	13	13
A 52	Malignant neoplasm of cervix uteri	—	3	3
A 53	Malignant neoplasm of other and unspecified parts of uterus	—	3	3
A 54	Malignant neoplasm of prostate	18	—	18
A 55	Malignant neoplasm of skin	1	1	2
A 57	Malignant neoplasm of all other and unspecified sites ..	23	19	42
A 58	Leukaemia and aleukaemia	3	2	5
A 59	Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	—	2	2
A 60	Benign neoplasms and neoplasms of unspecified nature	1	2	3
A 63	Diabetes mellitus	6	8	14
A 64	Avitaminosis and other deficiency states	—	1	1
A 65	Anaemias	1	3	4
A 66	Allergic disorders; all other endocrine, metabolic and blood diseases	2	5	7
A 68	Psychoneuroses and disorders of personality	1	—	1
A 70	Vascular lesions affecting central nervous system	40	48	88
A 71	Nonmeningococcal meningitis	—	2	2
A 78	All other diseases of the nervous system and sense organs	3	7	10
A 79	Rheumatic fever	2	4	6
A 80	Chronic rheumatic heart disease	7	6	13
A 81	Arteriosclerotic and degenerative heart disease	87	55	142
A 82	Other diseases of heart	6	2	8
A 83	Hypertension with heart disease	10	10	20
A 84	Hypertension without mention of heart	19	14	33
A 85	Diseases of arteries	13	10	23
A 86	Other diseases of circulatory system	3	—	3
A 88	Influenza	3	—	3
A 89	Lobar pneumonia	8	2	10
A 90	Broncho-pneumonia	4	4	8

<i>Inter- national List No.</i>	<i>Cause of Death</i>	<i>Number of Deaths</i>		
		<i>Male</i>	<i>Female</i>	<i>Total</i>
A 91	Primary atypical, other and unspecified pneumonia ..	—	1	1
A 92	Acute bronchitis	1	1	2
A 93	Bronchitis, chronic and unspecified	4	3	7
A 96	Pleurisy	1	—	1
A 97	All other respiratory diseases	7	3	10
A 99	Ulcer of stomach	4	1	5
A 101	Ulcer of duodenum	1	—	1
A 102	Appendicitis	5	1	6
A 103	Intestinal obstruction and hernia	2	5	7
A 104	Gastro-enteritis and colitis, except diarrhoea of the newborn	3	7	10
A 105	Cirrhosis of liver	7	3	10
A 106	Cholelithiasis and cholecystitis	3	2	5
A 107	Other diseases of digestive system	6	2	8
A 108	Acute nephritis	3	1	4
A 109	Chronic, other and unspecified nephritis	2	5	7
A 110	Infections of kidney	2	1	3
A 111	Calculi of urinary system	2	—	2
A 112	Hyperplasia of prostate	3	—	3
A 114	Other diseases of genito-urinary system	3	—	3
A 115	Sepsis of pregnancy, childbirth and the puerperium ..	—	1	1
A 116	Toxaemias of pregnancy and the puerperium	—	4	4
A 117	Haemorrhage of pregnancy and childbirth	—	1	1
A 120	Other complications of pregnancy, childbirth and the puerperium	—	5	5
A 121	Infections of skin and subcutaneous tissue	—	1	1
A 122	Arthritis and spondylitis	1	2	3
A 126	All other diseases of skin and musculoskeletal system ..	1	3	4
A 128	Congenital malformations of circulatory system	5	4	9
A 129	All other congenital malformations	5	2	7
A 130	Birth injuries	11	6	17
A 131	Postnatal asphyxia and atelectasis	9	2	11
A 132	Infections of the newborn	1	—	1
A 133	Haemolytic disease of the newborn	1	2	3
A 134	All other defined diseases of early infancy	2	2	4
A 135	Ill-defined diseases peculiar to early infancy and immaturity unqualified	12	14	26
A 136	Senility without mention of psychosis	6	3	9
A 137	Ill-defined and unknown causes of morbidity and mortality	11	4	15
AE 138	Motor vehicle accidents	27	3	30
AE 139	Other transport accidents	11	—	11
AE 140	Accidental poisoning	4	2	6
AE 141	Accidental falls	4	4	8
AE 142	Accident caused by machinery	1	—	1
AE 143	Accident caused by fire and explosion of combustible material	1	—	1
AE 144	Accident caused by hot substance, corrosive liquid, steam and radiation	2	1	3
AE 145	Accident caused by firearm	2	—	2
AE 146	Accidental drowning and submersion	5	1	6
AE 147	All other accidental causes	19	13	32
AE 148	Suicide and self-inflicted injury	14	2	16
AE 149	Homicide and injury purposely inflicted by other persons (not in war)	—	3	3
		<u>570</u>	<u>387</u>	<u>957</u>

TABLE D.
ADMISSIONS TO GOVERNMENT HOSPITALS AND OUT-PATIENT ATTENDANCES, 1951.

Hospital	Admissions				Deaths				Out-patient Attendances			
	European	Coloured and Asiatic	African	Total	European	Coloured and Asiatic	African	Total	European	Coloured and Asiatic	African	Total
General:												
Salisbury ..	3,922	370	12,897	17,189	140	21	611	772	26,399	1,482	155,894	183,775
Bulawayo ..	5,475	613	9,396	15,484	143	19	516	678	13,188	1,750	172,597	187,535
Bindura ..	203	—	1,497	1,700	3	—	71	74	562	—	5,001	5,563
Chipinga ..	194	—	—	194	3	—	—	3	795	—	—	795
Enkeldoorn ..	257	—	1,765	2,022	4	—	41	45	369	—	1,578	1,947
Fort Victoria ..	465	23	2,416	2,904	13	3	109	125	3,504	177	16,752	20,433
Gatooma ..	908	109	6,463	7,480	19	2	308	329	274	56	13,621	13,951
Gwanda ..	262	43	5,562	5,867	5	1	81	87	230	15	2,760	3,005
Gwelo ..	1,536	118	4,145	5,799	37	5	199	241	1,754	128	29,722	31,604
Marandellas ..	219	—	—	219	4	—	—	4	863	—	—	863
Que Que ..	619	10	2,822	3,451	12	—	176	188	359	—	4,337	4,696
Rusape ..	314	8	3,741	4,063	8	—	100	108	1,560	—	22,543	24,103
Selukwe ..	278	—	—	278	9	—	—	9	139	—	—	139
Shamva ..	4	—	2,483	2,487	—	—	38	38	74	—	2,231	2,305
Sinoia ..	416	—	2,971	3,387	5	—	125	130	318	—	10,453	10,771
Umtali ..	1,548	189	4,303	6,040	21	5	177	203	548	479	21,964	22,991
TOTAL (16) ..	16,620	1,483	60,461	78,564	426	56	2,552	3,034	50,936	4,087	459,453	514,476
Special Hospitals:												
Ingutsheni ..	110	7	354	471	13	2	100	115	—	—	—	—
Nervous Disorders ..	189	—	—	189	4	—	—	4	238	—	—	238
Martin T.B. Sanatorium ..	—	—	124	124	—	—	22	22	—	—	12	12
Harari Maternity ..	—	—	2,393	2,393	—	—	14	14	—	—	2,860	2,860
Mpilo Maternity ..	—	—	2,568	2,568	—	—	4	4	—	—	9,175	9,175
TOTAL (5) ..	299	7	5,439	5,745	17	2	140	159	238	—	12,047	12,285
GRAND TOTAL ..	16,919	1,490	65,900	84,309	443	58	2,692	3,193	51,174	4,087	471,500	526,761

TABLE E.

STAFFING, BEDS, AND PATIENTS OF GOVERNMENT HOSPITALS, 1951.

Hospital	Nursing Staff			Number of Beds			Number of In-patients (a)			Inpatients Daily Average			Number of In-patient Units Maintained			Average Stay in Hospital in Days		
	Euro-pean	Coloured and Asiatic	African	Euro-pean	Coloured and Asiatic	African	Euro-pean	Coloured and Asiatic	African	Euro-pean	Coloured and Asiatic	African	Euro-pean	Coloured and Asiatic	African	Euro-pean	Coloured and Asiatic	African
<i>General:</i>																		
Salisbury ..	115	4	86	150	22	284	4,016	384	13,276	17,676	134.7	14.9	393.6	5,438	143,649	193,264	12.2	10.8
Bulawayo ..	114	9	98	244	30	337	5,599	630	9,745	15,974	181.3	21.1	335.9	7,714	122,604	196,510	11.8	12.6
Bindura ..	6	—	15	10	—	30	206	—	1,538	1,744	2.3	—	39.4	—	14,395	15,227	4.0	9.4
Chipinga ..	5	—	—	14	—	—	197	—	—	197	3.6	—	—	—	—	1,308	6.6	—
Enkeldoorn ..	6	—	13	14	—	45	263	—	1,812	2,075	6.5	—	54.8	—	19,990	22,375	9.1	11.0
Fort Victoria ..	7	—	14	24	1	34	475	23	2,467	2,965	8.7	—	72.3	122	26,391	29,688	6.7	10.7
Gatooma ..	20	—	44	44	12	240	919	116	6,730	7,765	20.2	3.1	268.7	1,121	98,089	106,598	8.0	14.6
Gwanda ..	6	—	18	6	—	84	266	43	5,713	6,022	4.2	0.6	133.4	214	48,675	50,431	5.8	8.5
Gwelo ..	24	7	23	56	14	72	1,568	122	4,292	5,982	40.9	4.0	120.3	1,466	43,927	60,315	9.5	10.2
Marandellas ..	6	—	6	10	—	—	223	—	—	223	4.8	—	—	—	—	1,755	7.9	—
Que Que ..	17	—	19	25	10	92	630	10	2,915	3,555	19.4	0.3	79.9	115	47,948	55,134	11.2	16.4
Rusape ..	6	—	10	15	4	42	320	11	3,845	4,176	6.3	0.1	81.4	54	29,727	32,077	7.2	8.3
Selukwe ..	5	—	3	12	—	—	287	—	—	287	5.6	—	—	—	—	2,041	7.1	—
Shamva ..	2	—	3	6	—	39	4	—	2,540	2,544	—	—	87.7	11	31,999	32,010	3.0	12.6
Sinoia ..	7	—	18	13	—	101	421	—	3,055	3,476	7.1	—	112.5	—	41,061	43,647	6.1	14.3
Umtali ..	19	4	14	45	8	80	1,571	196	4,438	6,205	35.1	6.5	131.4	2,363	47,958	63,120	8.1	10.8
TOTAL ..	365	24	384	688	101	1,480	16,965	1,535	62,366	80,866	480.8	51.0	1,962.8	18,607	716,413	910,500	10.3	11.5
<i>Special Hospitals:</i>																		
Ingutsheni ..	47	—	75	136	—	580	274	30	1,082	1,386	162.9	22.2	753.4	8,117	274,998	342,559	216.9	254.2
Nervous Disorders ..	5	—	—	23	—	—	202	—	—	202	10.8	—	—	—	—	3,935	19.5	—
Martin Sanatorium ..	4	—	14	—	—	100	—	—	174	174	—	—	72.9	—	26,597	26,597	—	152.9
Harari Maternity ..	3	—	27	—	—	56	—	—	2,447	2,447	—	—	47.5	—	17,337	17,337	—	7.1
Mpilo Maternity ..	3	—	28	—	—	41	—	—	2,595	2,595	—	—	42.9	—	15,661	15,661	—	6.0
TOTAL ..	62	—	144	159	—	777	476	30	6,298	6,804	173.6	22.2	916.7	8,117	334,593	406,089	133.1	53.1
GRAND TOTAL ..	427	24	528	847	101	2,257	17,441	1,565	68,664	87,670	654.4	73.2	2,879.5	26,724	1,051,006	1,316,589	13.7	15.3

(a) Includes patients in hospital on 1st January, 1951.

MEDICAL MISSIONS, 1951.

TABLE G.

Missions Grouped by Denominations	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Attendances			Staff (Resident)			Beds	
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	Medical	Nursing	Aux- iliary	Author- ised for Grants	Total
<i>American Board:</i>																				
Chikore	42	883	925	325	5,378	5,703	—	4	4	77	3,045	3,122	362	7,663	8,025	1	1	1	16	16
Mt. Selinda	136	1,779	1,915	1,428	19,582	21,010	6	47	53	181	3,110	3,291	2,663	7,598	10,261	2	3	3	50	50
<i>Anglican:</i>																				
Daramombe	—	314	314	—	1,939	1,939	—	7	7	13	10,961	10,974	41	13,006	13,047	—	1	1	—	2
St. Augustine's	1	53	54	5	353	358	—	—	—	171	10,585	10,756	353	12,120	12,473	—	1	—	—	14
St. David's, Bonda	398	2,745	3,143	4,453	27,063	31,516	—	37	37	391	3,163	3,554	3,018	7,109	10,127	1	6	1	65	80
St. Faith's	—	123	123	—	587	587	—	—	—	40	8,941	8,981	220	9,709	9,929	—	1	1	2	10
St. Patrick's	—	24	24	—	60	60	—	2	2	275	2,678	2,953	1,512	5,196	6,708	1	—	1	3	3
<i>Brethren in Christ:</i>																				
Mtshabezi	56	628	684	795	8,855	9,650	—	10	10	184	1,580	1,764	690	7,520	8,210	1	1	4	15	32
<i>Church of Christ:</i>																				
Nhowe	27	343	370	210	1,093	1,303	—	4	4	—	2,350	2,350	—	4,135	4,135	1	—	—	4	16
<i>Dutch Reformed Church:</i>																				
Gutu	—	346	346	—	2,450	2,450	—	29	29	239	2,951	3,190	1,879	23,841	25,720	1	1	3	18	18
Morgenster	—	2,120	2,120	—	26,762	26,762	—	87	87	930	8,770	9,700	11,089	42,102	53,191	3	3	3	62	65
<i>Elim Missions:</i>																				
Elim, Inyanga	3	26	29	10	74	84	—	—	—	9	810	819	39	1,350	1,389	1	—	1	—	2
<i>Evangelical Alliance:</i>																				
Mavuradontha	—	—	—	—	—	—	—	—	—	35	1,614	1,649	180	3,821	4,001	—	1	—	—	—
Msengedzi	5	16	21	16	188	204	—	—	—	44	6,212	6,256	226	8,859	9,085	—	1	—	—	—
Rukomitshi	—	—	—	—	—	—	—	—	—	3	283	286	30	375	405	—	1	—	—	—
<i>Free Methodist Church of North America:</i>																				
Chikombedzi	—	55	55	—	582	582	—	3	3	16	3,788	3,804	91	14,149	14,240	1	1	—	—	12
Lundi	—	81	81	—	148	148	—	—	—	133	3,923	4,056	841	16,248	17,089	—	1	—	—	1
<i>Free Presbyterian Church of Scotland:</i>																				
Zenka	—	—	—	—	—	—	—	—	—	19	3,987	4,006	210	5,494	5,704	—	1	—	—	—
<i>London Missionary Society:</i>																				
Dombodema	—	56	56	—	336	336	—	1	1	144	4,302	4,446	596	5,706	6,302	—	1	—	—	4
<i>Methodist Episcopal:</i>																				
Mutambara	157	1,141	1,298	5,260	13,847	19,107	2	6	8	1,593	2,707	4,300	28,336	18,233	46,569	—	2	2	27	27
Nyaderi	187	2,940	3,127	1,406	21,174	22,580	3	64	67	—	1,126	1,126	—	10,754	10,754	1	2	4	56	56
Old Umtali	17	837	854	147	5,528	5,675	—	6	6	89	4,036	4,125	934	12,169	13,103	—	1	2	24	30

Missions Grouped by Denominations	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Attendances			Staff (Resident)			Beds		
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	Medical	Nursing	Aux-iliary	Author-ised for Grants	Total	
<i>Roman Catholic:</i>																					
All Soul's, Mtoko	9	1,127	1,136	95	7,018	7,113	—	17	17	721	11,938	12,659	3,790	24,999	28,789	—	1	—	16	16	
Chishiwasha	2	152	154	8	1,131	1,139	1	2	3	78	14,731	14,809	450	17,696	18,146	—	1	1	5	5	
Driefontein	22	214	236	144	1,345	1,489	—	3	3	354	4,414	4,768	1,810	8,510	10,320	—	1	—	3	8	
Empandeni	—	374	374	—	2,163	2,163	—	3	3	275	4,886	5,161	1,715	47,241	48,956	—	1	1	12	26	
Fatima	195	694	889	2,766	9,340	12,106	2	11	13	153	2,340	2,493	825	5,212	6,037	1	1	—	30	80	
Gokomere	12	448	460	142	3,468	3,610	—	6	6	189	6,050	6,239	1,134	6,816	7,950	—	1	—	19	19	
Holy Cross	261	397	658	2,202	3,144	5,346	2	11	13	2,760	821	3,581	25,531	4,959	30,490	—	1	—	4	4	
Mount Melleray	1	350	351	—	1,863	1,863	—	10	10	22	820	842	150	2,600	2,750	1	1	—	—	6	
Mukaro	98	720	818	1,176	10,633	11,809	1	4	5	1,034	10,557	11,591	15,408	56,684	72,092	—	1	—	—	3	
Silveira	44	918	962	285	7,123	7,408	—	11	11	107	7,574	7,681	466	20,544	21,010	1	2	—	24	24	
St. Barbara's	121	882	1,003	716	11,099	11,815	2	10	12	101	10,811	10,912	550	32,486	33,036	—	1	1	20	20	
St. Joseph's, Gwelo	23	338	361	253	2,663	2,916	3	10	13	349	14,430	14,779	3,647	29,154	32,801	—	1	—	6	6	
St. Joseph's, Semokwe	19	354	373	133	4,170	4,303	2	4	6	782	2,287	3,069	3,273	6,543	9,816	—	1	4	15	15	
St. Luke's, Bubi (a)	2	48	50	14	328	342	—	2	2	195	1,394	1,589	432	1,912	2,344	1	—	—	—	32	
St. Michael's, Mondoro	46	659	705	298	5,254	5,552	—	—	—	223	6,423	6,646	567	12,336	12,903	—	1	1	6	20	
St. Paul's, Musami	60	1,442	1,502	589	8,481	9,070	—	32	32	128	5,754	5,882	1,377	18,064	19,441	—	1	—	13	25	
Triashill	164	834	998	1,234	10,036	11,270	2	10	12	295	5,003	5,298	1,983	11,565	13,548	—	1	1	24	24	
<i>Salvation Army:</i>																					
Howard Institute	1	643	644	18	7,272	7,290	—	7	7	4	2,148	2,152	18	11,048	11,066	—	1	1	15	22	
Mbembeswana	27	127	154	100	641	741	1	2	3	197	1,324	1,521	1,357	3,664	5,021	—	—	1	6	6	
Tshelanyemba	430	434	864	3,116	2,864	5,980	—	8	8	1,621	1,663	3,284	9,304	5,388	14,692	—	1	1	8	8	
<i>Seventh Day Adventist:</i>																					
Lower Gwelo	69	766	835	604	5,909	6,513	1	21	22	883	6,111	6,994	3,879	8,174	12,053	—	2	—	16	16	
Solusi	155	230	385	775	1,150	1,925	—	3	3	980	3,009	3,989	4,861	14,316	19,177	—	1	—	5	5	
<i>South African General Mission:</i>																					
Rusitu	10	277	287	98	2,373	2,471	1	6	7	32	2,665	2,697	247	7,084	7,331	—	1	—	8	16	
<i>Swedish Mission:</i>																					
Manana	519	683	1,202	11,201	18,849	30,050	—	6	6	121	180	301	1,452	2,160	3,612	—	1	2	25	25	
Mtase	1,204	539	1,743	29,863	12,927	42,790	—	20	20	437	417	854	3,896	3,784	7,680	—	2	2	50	50	
Mnene	1,022	2,906	3,928	25,356	61,627	86,983	—	71	71	573	1,262	1,835	3,128	5,145	8,273	1	5	6	160	160	
<i>Weslyan Methodist:</i>																					
Epworth	—	—	—	—	—	—	—	—	—	13	1,870	1,883	133	11,040	11,173	—	1	—	—	—	
Waddilove	—	871	871	—	5,673	5,673	—	21	21	—	5,283	5,283	—	12,975	12,975	—	1	—	20	20	
TOTAL (50)	5,545	31,937	37,482	95,241	344,533	439,774	29	618	647	17,213	227,087	244,300	144,693	629,256	773,949	19	63	49	852	1,099	

(a) Opened 1st November, 1951.

TABLE H.

MATERNITY HOMES, 1951.

Name	Town	Patients remaining 1.1.51	Admitted	Patients remaining 31.12.51	Died	Confine- ments	Births		Deaths of Infants	Operations		Equipped Beds
							Live	Still		Major	Minor	
Lady Chancellor	Salisbury	28	1,373	30	—	1,279	1,277	16	20	7	542	43
Lady Rodwell	Bulawayo	19	1,059	23	3	926	941	9	17	31	323	38
Lady Kennedy	Umtali	5	327	9	1	294	290	4	9	13	44	10
Appleby	Bindura	1	56	1	—	47	45	3	—	3	14	4
Birchenough	Gwelo	4	239	3	—	209	209	—	3	—	3	9
Donaldson	Selukwe	1	32	1	—	29	29	—	—	2	—	6
Enkeldoorn	Enkeldoorn	1	24	1	—	25	25	—	—	1	—	2
Fort Victoria	Fort Victoria	1	94	—	1	92	93	1	2	3	5	9
Que Que	Que Que	4	104	4	—	105	104	1	3	2	—	6
Rusape	Rusape	—	62	1	—	62	61	1	3	6	4	2
Sinoia	Sinoia	2	75	—	—	67	66	1	—	3	—	2
Total Government operated Homes (11)		66	3,445	73	5	3,135	3,140	26	27	71	935	131
Clarison	Bulawayo	3	173	5	—	173	173	—	—	—	—	10
Queen Mary	Gatooma	4	139	2	—	135	135	4	—	—	38	11
Greenwood Park	Salisbury	—	150	5	—	160	162	—	1	—	12	13
Total Privately operated Homes (3)		7	462	12	—	468	470	4	1	—	50	34
GRAND TOTAL		73	3,907	85	5	3,603	3,610	30	28	71	985	165

(a) Opened 4th March, 1951.

EUROPEAN SCHOOLS : FINDINGS OF MEDICAL INSPECTION, 1951. TABLE I.

Routine Medical Examinations Children Born		Group 0, 1945	Group 1, 1944, 1943	Group 2, 1942, 1941	Group 3, 1940, 1939	Group 4, 1938, 1937	Group 5, 1936, 1935	Group 6, 1934, 1933	Total	Percentage
Children Examined		490	857	938	777	662	328	43	4,095	—
<i>Nutritional State:</i> U.K. Board of Education Classification										
A		33	78	115	144	234	165	24	793	19·4
B		330	558	610	517	380	151	18	2,564	62·6
C		124	217	209	115	48	12	1	726	17·7
D		3	4	4	1	—	—	—	12	0·3
<i>Skin Diseases</i>		26	28	21	31	25	11	2	144	3·5
<i>Scalp</i>		1	6	7	8	11	3	2	38	0·9
<i>Dental Defects</i>		40	91	122	84	88	42	3	470	11·4
<i>E.N.T.:</i>										
Tonsils and Adenoids (1) Removed previously		91	203	312	326	289	164	23	1,408	34·4
(2) Enlarged		50	59	54	37	20	6	2	228	5·6
(3) Removal advised		18	12	21	6	5	2	1	65	1·6
<i>Nose</i>		90	143	77	38	27	11	2	388	9·4
<i>Ears:</i>										
Wax, Otitis Media, etc.		17	33	49	40	21	8	5	173	4·2
Defective hearing—slight		8	13	31	21	9	3	1	86	2·1
Defective hearing—marked		1	—	1	1	—	1	—	4	0·1
<i>Speech Defects</i>		3	3	7	3	6	1	—	23	0·6
<i>Eyes, Lids:</i>										
Squint		5	15	7	10	5	2	—	44	1·1
Other conditions		13	19	41	21	17	10	—	121	3·0
<i>Vision:</i>										
Refractive Defects (1) For observation		9	41	61	44	17	11	1	184	4·5
(2) Requiring glasses		—	20	31	36	30	13	3	133	3·2
(3) Having glasses		6	20	26	28	53	26	4	163	3·4
Other Defects		—	1	3	3	1	2	—	10	0·2
<i>Heart:</i>										
Functional Disorders		5	9	5	3	2	2	—	26	0·6
Organic Diseases (1) Rheumatic		—	1	—	4	4	—	—	9	0·2
(2) Other		3	6	6	3	3	3	—	24	0·6
<i>Lungs:</i>										
Asthma		—	3	2	2	3	—	—	10	0·2
Bronchitis, Other		17	21	13	2	6	1	1	61	1·5
<i>Abdomen:</i>										
Enlarged Spleen		3	2	5	2	2	1	—	15	0·4
Other		4	6	10	13	18	7	—	58	1·4
<i>Nervous System:</i>										
Functional Disorders		13	12	13	6	5	—	—	49	1·2
Organic Diseases		—	5	6	2	4	1	—	18	0·4
<i>Posture Defects:</i>										
Spinal		30	68	137	100	71	50	5	461	11·2
Spinal and Flat Feet		20	83	107	106	86	21	4	427	10·4
Flat Feet		71	124	139	117	113	49	5	618	15·1
<i>Deformities:</i>										
Head, Neck, Arms		2	3	4	2	4	3	—	18	0·4
Spine, Chest		5	12	6	4	8	1	—	36	0·9
Hips, Legs, Feet		93	117	110	68	94	29	4	515	12·5
Other Conditions		28	26	44	33	31	13	—	175	4·3

COLOURED AND INDIAN SCHOOLS : FINDINGS OF MEDICAL INSPECTION, 1951. TABLE J.

Routine Medical Examinations		Group 0, 1945	Group 1, 1944, 1943	Group 2, 1942, 1941	Group 3, 1940, 1939	Group 4, 1938, 1937	Group 5, 1936, 1935	Group 6, 1934, 1933	Total	Percentage
<i>Children Examined</i>		130	267	255	235	202	154	40	1,283	
<i>Nutritional State:</i> U.K. Board of Education Classification										
A		2	3	7	17	29	50	21	129	10.1
B		54	121	123	130	134	90	18	670	52.2
C		67	134	118	81	34	14	1	449	35.0
D		7	9	7	7	5	—	—	35	2.7
<i>Skin Diseases</i>		3	13	5	5	7	2	3	38	2.9
<i>Scalp</i>		13	27	15	15	21	14	3	108	8.4
<i>Dental Defects</i>		28	38	20	25	26	20	3	160	12.5
<i>E.T.N.:</i>										
Tonsils and Adenoids (1) Removed previously		—	4	15	19	19	23	3	83	6.5
(2) Enlarged		13	23	13	15	12	3	1	80	6.2
(3) Removal advised		1	1	1	4	1	1	—	9	0.7
<i>Nose</i>		16	31	14	21	14	2	—	98	7.7
<i>Ears:</i>										
Wax, Otitis Media, etc.		4	8	9	6	5	2	—	34	2.7
Defective hearing—slight		4	4	7	5	5	2	—	27	2.1
Defective hearing—marked		—	—	1	1	—	1	—	3	0.2
<i>Speech Defects</i>		—	1	—	—	1	—	—	2	0.2
<i>Eyes, Lids:</i>										
Squint		—	1	1	1	2	3	—	8	0.6
Other conditions		1	4	2	3	2	—	1	13	1.0
<i>Vision:</i>										
Refractive Defects (1) For observation		—	8	12	9	5	7	2	43	3.4
(2) Having glasses		—	—	—	1	7	3	2	13	1.0
(3) Requiring glasses		—	—	4	6	6	8	3	27	2.1
Other Defects		—	—	1	—	1	1	—	3	1.2
<i>Heart:</i>										
Functional Disorders		1	1	3	—	2	2	—	9	0.7
Organic Diseases (1) Rheumatic		—	—	—	—	—	—	—	—	—
(2) Other		1	1	—	3	1	4	—	10	0.8
<i>Lungs:</i>										
Asthma		—	—	—	—	—	—	—	—	—
Bronchitis, Other		3	5	5	4	1	—	—	18	1.4
<i>Abdomen:</i>										
Enlarged Spleen		2	1	2	4	2	5	1	17	1.3
Other		—	—	1	1	2	1	1	6	0.5
<i>Nervous System:</i>										
Functional Disorder		—	1	—	—	—	1	—	2	0.2
Organic Diseases		1	—	—	—	—	—	—	1	1.1
<i>Posture Defects:</i>										
Spinal		27	60	31	26	25	18	2	189	14.7
Spinal and Flat Feet		8	14	14	28	24	7	8	103	8.0
Flat Feet		2	12	22	21	18	11	3	89	6.9
<i>Deformities:</i>										
Head, Neck, Arms		1	—	—	1	1	—	—	3	0.2
Spine, Chest		2	1	—	1	2	—	—	6	0.5
Hips, Legs, Feet		15	25	21	19	26	8	3	117	9.1
Other Conditions		4	12	12	6	10	8	—	52	4.1

REPORT OF PUBLIC HEALTH LABORATORY, SALISBURY.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood Counts, etc.	12,909	3,982	16,891
Blood films for Parasites	3,023	3,029	6,052
<i>P. falciparum</i>	380	474	—
<i>P. vivax</i>	5	1	—
<i>P. malariae</i>	12	6	—
Trypanosomes	—	6	—
Filaria	—	6	—
Spirochaetes	1	16	—
Cultural—			
Blood Cultures Performed	141	395	536
Salmonella Group	11	28	—
Brucella Group	1	—	—
Other Organisms	13	60	—
Serological—			
Agglutination Tests	1,069	829	1,898
Salmonella Group	166	313	—
Brucella Group	228	50	—
Other Organisms	33	29	—
Serological Tests for Syphilis	1,110	33,455	34,565
Gonococcal Complement Fixation Tests	5	1	6
Grouping—Landsteiner	565	300	865
Grouping—Rhesus	1,021	3	1,024
Biochemical—			
Estimations Performed	949	1,021	1,970
Miscellaneous—			
Sedimentation Rates, Fragility Curves, Spectroscopic Examinations, etc.	1,299	430	1,729
URINE.			
Chemical Examinations	2,704	386	3,090
Centrifuged Deposits Examined	8,679	9,477	18,156
<i>B. haematobium</i>	155	2,310	—
<i>B. mansoni</i>	1	2	—
Miscellaneous Parasites	12	12	—
Centrifuged Deposits Cultured	639	287	926
Salmonella Group	1	3	—
Other Organisms	218	23	—
Miscellaneous Examinations	92	12	104
SPUTUM.			
Microscopical—			
Unstained Preparations Examined	3	1	4
Stained Films Examined	1,400	3,772	5,122
Bacteriological—			
Specimens Cultured	14	1	15
FAECES.			
Direct or Concentrated Films	4,957	6,777	11,734
<i>B. mansoni</i>	27	423	—
<i>B. haematobium</i>	5	34	—
<i>E. histolytica-trophozoites</i>	12	35	—
<i>E. histolytica-cysts</i>	13	10	—
Miscellaneous Parasites	156	856	—
Bacteriological—			
Specimens Cultured	250	340	590
Chemical—			
Estimations or Tests Performed	88	31	119

	European	Non-European	Total
CEREBRO-SPINAL FLUID.			
Routine Chemical Examinations	813	1,373	2,186
Routine Bacteriological Examinations	181	944	1,125
Streptococcus	—	21	—
Neisseria	7	222	—
Haemophilus	—	7	—
Wassermann Reactions	22	245	267
PUS, EXUDATES, PUNCTURE FLUIDS.			
Microscopic—			
Examinations Performed	1,081	1,363	2,444
Culture—			
Specimens Cultured	739	436	1,175
Bacteria	211	83	—
Fungi	7	5	—
Chemical—			
Qualitative or Quantitative Examinations Performed	4	29	33
AUTOGENOUS VACCINES.			
Number Prepared	15	—	15
ANIMAL INOCULATIONS.			
Friedman Tests	135	1	136
Virulence Tests	18	17	35
<i>C. diphtheriae</i>	17	15	—
<i>Myco. tuberculosis</i>	1	2	—
MISCELLANEOUS.			
Water Samples Examined	192	—	192
Fractional Test Meals	142	5	147
Glucose Tolerance Curves	37	—	37
Hospital Sterilisers	11	—	11
Government Analyst—Specimens to	53	11	64
Chemical Tests for Pregnancy—Kapeller Adler	238	6	244
Ice Cream Samples Examined	17	—	17
Milk Samples Examined	18	—	18
MEDICO-LEGAL EXAMINATIONS.			
Smears for Spermatozoa, Blood Groups, etc.	9	37	46
HISTOLOGICAL EXAMINATIONS.			
Post-Mortem Examinations	40	795	835
Post-Mortem Histology	24	116	140
Phthisis Bureau Histology	8	151	159
Surgical Histology	1,600	801	2,401
TOTAL EXAMINATIONS PERFORMED			117,123

UMTALI LABORATORY.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood Counts, etc.	1,627	626	2,253
Blood Films for Parasites	473	450	923
<i>P. falciparum</i>	78	103	—
<i>P. vivax</i>	1	—	—

	European	Non-European	Total
Cultural—			
Blood Cultures Performed	7	—	7
Serological—			
Agglutination Tests	75	105	180
Grouping—Landsteiner	31	47	78
Biochemical—			
Estimations Performed	154	20	174
Miscellaneous—			
Sedimentation Rates, Fragility Curves, Spectroscopic Examinations, etc.	122	91	213
URINE.			
Chemical Examinations	570	464	1,034
Centrifuged Deposits Examined	996	6,423	7,419
<i>B. haematobium</i>	11	935	—
Centrifuged Deposits Cultured	143	6	149
SPUTUM.			
Microscopical—			
Stained Films Examined	41	308	349
FAECES.			
Direct or Concentrated Films	582	6,110	6,692
Chemical—			
Estimations or Tests Performed	3	—	3
<i>B. manson</i> i	10	146	—
<i>E. histolytica</i> —trophozoites	—	2	—
Miscellaneous Parasites	20	919	—
Bacteriological—			
Specimens Cultured	66	10	76
CEREBRO-SPINAL FLUID.			
Routine Chemical Examinations	7	14	21
Routine Bacteriological	7	36	43
Neisseria	—	6	—
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopic—			
Examinations Performed	47	514	561
Culture—			
Specimens Cultured	65	10	75
MISCELLANEOUS.			
Fractional Tests Meals	54	2	56
Glucose Tolerance Curves	3	—	3
TOTAL EXAMINATIONS PERFORMED			20,309

REPORT OF THE PUBLIC HEALTH LABORATORY, BULAWAYO.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood Counts	12,480	4,556	17,036
Blood Films for Parasites	2,112	3,486	5,598
<i>P. falciparum</i>	75	616	—
<i>P. vivax</i>	29	68	—
<i>P. Malariae</i>	2	10	—
Filaria	—	8	—
Spirochaetes	1	7	—
Cultural—			
Blood Cultures Performed	160	701	861
Salmonella Group	6	31	—
Other Organisms	3	14	—
Serological—			
Agglutination Tests	807	3,631	4,438
Salmonella Group	33	156	—
Brucella Group	13	2	—
Other Organisms	5	1	—
Serological Tests for Syphilis	999	25,431	26,430
Gonococcal Complement Fixation Tests	4	—	4
Grouping—Landsteiner	260	195	455
Grouping—Rhesus	172	—	172
Biochemical—			
Examinations Performed	1,414	374	1,788
Miscellaneous—			
Sedimentation Rates, Fragility Curves, Spectroscopic Examinations, etc.	772	443	1,215
URINE.			
Chemical Examinations	2,920	3,134	6,054
Centrifuged Deposits Examined	4,721	4,701	9,422
Centrifuged Deposits Cultured	1,863	1,002	2,865
Miscellaneous Examinations	7	—	7
SPUTUM.			
Microscopical—			
Unstained Preparations Examined	4	2	6
Stained Films Examined	582	1,722	2,304
Bacteriological—			
Specimens Cultured	71	31	102
FAECES.			
Direct or Concentrated Films	3,834	2,084	5,918
<i>B. mansonii</i>	3	10	—
<i>E. histolytica</i> (trophozoites)	22	32	—
<i>E. histolytica</i> (cysts)	41	12	—
Other Parasites	99	218	—
Bacteriological—			
Specimens Cultured	973	2,064	3,037
Salmonella Organisms Isolated	7	7	—
Shigella Organisms Isolated	14	1	—
Chemical—			
Examinations or Tests Performed	41	3	44
CEREBRO-SPINAL FLUID.			
Routine Chemical Examinations	198	500	698
Routine Bacteriological Examinations	60	281	341
<i>Strept. pneumoniae</i>	2	20	—
<i>Neisseria</i>	6	151	—
<i>Myco. tuberculosis</i>	1	—	—
Wassermann Reactions	52	219	271

	European	Non-European	Total
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Examinations Performed	541	459	1,000
Cultural—			
Specimens Cultured—Bacteria	812	940	1,752
Specimens Cultured—Fungi	7	3	10
Chemical—			
Qualitative or Quantitative Examinations Performed	9	12	21
AUTOGENOUS VACCINES.			
Number Prepared	15	—	15
ANIMAL INOCULATIONS.			
Virulence Tests—			
<i>Myco. tuberculosis</i>	3	3	6
POST-MORTEM EXAMINATIONS.			
Number Performed	—	—	26
HISTOLOGICAL EXAMINATIONS.			
Number and Sections Examined	1,350	540	1,890
MEDICO-LEGAL EXAMINATIONS.			
Smears for Spermatozoa, Blood Groups, etc.	—	—	150
MISCELLANEOUS TESTS.			
Fractional Test Meals	67	—	67
Seminal Fluids	60	2	62
Examination for Cancer Cells in Sputa and Exudates ..	15	—	15
Sensitivity Tests (antibiotics)	280	12	292
Waters	—	—	420
TOTAL EXAMINATIONS PERFORMED	37,665	56,531	94,792

GWELO LABORATORY.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood Counts, etc.	1,435	235	1,670
Blood Films for Parasites	157	480	637
<i>P. falciparum</i>	11	113	—
<i>P. vivax</i>	1	—	—
Cultural—			
Blood Cultures Performed	57	32	89
Salmonella Group	—	2	—
Brucella Group	1	—	—
Other Organisms	1	6	—
Serological—			
Agglutination Tests	105	161	266
Salmonella Group	9	59	—
Brucella Group	1	—	—
Other Organisms	2	—	—
Serological Tests for Syphilis	308	5,119	5,427
Positive Reactions	84	2,085	—
Grouping—Landsteiner	52	5	57
Biochemical—			
Examinations Performed	123	6	129
Miscellaneous—			
Sedimentation Rates, etc.	106	16	122

	European	Non-European	Total
URINE.			
Chemical Examinations	389	1,308	1,697
Centrifuged Deposits Examined	510	1,181	1,691
Centrifuged Deposits Cultured	161	47	208
Miscellaneous Examinations	19	2	21
<i>B. haematobium</i>	2	99	—
SPUTUM.			
Microscopical—			
Stained Films Examined	193	587	780
Bacteriological—			
Specimens Cultured	7	2	9
FAECES.			
Direct or Concentrated Films	915	1,202	2,117
<i>B. mansoni</i>	—	2	—
<i>E. histolytica</i> (trophozoites)	26	5	—
<i>E. histolytica</i> (cysts)	103	120	—
Miscellaneous Findings	43	22	—
Bacteriological—			
Specimens Cultured	77	40	117
Salmonella Organisms Isolated	—	1	—
Shigella Organisms Isolated	1	1	—
Miscellaneous Organisms	6	—	—
Chemical—			
Estimations or Tests Performed	14	1	15
CEREBRO-SPINAL FLUID.			
Routine Chemical Examinations	48	43	91
Routine Bacteriological Examinations	5	70	75
<i>Strept. pneumoniae</i>	—	3	—
Neisseria	—	13	—
Kahn Reactions Performed	18	4	22
Positive Reactions	2	1	—
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Examinations Performed	147	375	522
Cultural—			
Specimens Cultured	139	158	297
Chemical—			
Qualitative or Quantitative Estimations	1	2	3
MEDICO-LEGAL EXAMINATIONS.			
Smears for Spermatozoa, Blood Groups, etc.	—	15	15
MISCELLANEOUS TESTS.			
Waters	—	—	8
Fractional Test Meals	16	—	16
Semen Analysis	3	—	3
Sensitivity Tests (antibiotics)	4	—	4
TOTAL EXAMINATIONS PERFORMED	5,009	11,091	16,108

REPORT OF THE GOVERNMENT ANALYST.

NUMERICAL SUMMARY AND ANALYSIS.

<i>Exhibits in connection with Criminal Investigation—</i>		
For presence of poisons	592	
For presence of bloodstains and for blood grouping	171	
For presence of seminal stains	156	
Miscellaneous forensic exhibits	140	
		1,059
<i>Samples of Water—</i>		
Private Domestic Supplies from boreholes, wells, mineshafts, rivers and springs	59	
Supplies to Government Establishments—Army, Police, Hospitals, Schools, etc.	16	
Town Supply Control, and from Sources for Augmenting Town supplies	28	
Community Supplies, control of, and investigation of, in outbreaks of illness	15	
Abnormal Waters, advice re clarification, purification, softening, etc.	8	
Corrosive and ferruginous borehole and well waters	10	
Industrial borehole and well supplies, mineral and general analysis and examination of sediments	14	
Waters for use in the Brewing Industry	8	
Waters for boiler use	10	
Supplies from Town Supplies and from one borehole for Fluorine Content	7	
Special studies for evidence of pollution by sewage, etc.	3	
Swimming Bath, Control and Advice	5	
		183
<i>Cows' Milk—</i>		
Official and routine samples for conformity to legal standards ..	90	
Individual cow samples for cryoscopic research	140	
		230
<i>Samples of Dairy Produce—</i>		
Butter, Cheese, Cream and Ice-cream		59
<i>Customs Control—</i>		
Cheeses, Soaps, Woollen Rugs, etc.	33	
Miscellaneous for tariff classification	16	
		49
<i>Illicit Spirits and Other Intoxicants</i>		31
<i>Clinical—</i>		
Human Milk specimens	6	
Various specimens from Public Health Laboratories	137	
		143
<i>Drugs and Chemicals</i> examined for the Government Medical Store and Wholesale Chemists		26
<i>Maize Meal</i> in connection with allocation of Government Contract ..		35
<i>Foodstuffs—</i>		
Samples in connection with Insurance Claims for Damage or lack of quality		16
Samples of Grass for Arsenic and Sulphur Contents		84
Food Technology Investigations		6
Miscellaneous		200
		2,162

Despite the fact that criminal investigation exhibits are no longer received from Northern Rhodesia the work done under this heading has remained the same.

In toxicological investigations, 136 cases were investigated involving the examination of 592 exhibits. Poisonous substances were found in 48 cases. Arsenic was found in 19 cases and keeps its place at the top of the list of poisonous substances found. This is not surprising in view of the casual manner in which arsenic is stored and handled. Cattle dip, which contains large quantities of arsenic salts, is often stored close to bags of mealie meal used for food and thus accidental contamination quite often occurs. One interesting incident,

which occurred in the outskirts of Salisbury, was the chronic poisoning of a whole family drawing their water from a disused mine shaft on the property. One member of the family had been ill for some years with a chronic exfoliating dermatitis with discoloration which at one stage was diagnosed as Addison's disease. Finally, a medical practitioner suspected the cause and the urine sample showed 6·0 parts per million of arsenious oxide. The water from the mineshaft, which had been in use for many months, contained 2·8 parts. Clippings of the hair from the children of the family were found to contain 27 to 40 parts per million, about one hundred times the normal content. Other poisons found included cyanide, ethyl alcohol, barbiturates and other medicinal poisons, caustic soda and a number of vegetable poisonings including, castor oil seeds and juice of *Euphorbia nigens*, the root of *Lasiosiphon kraussii*, and cyanogenetic glucoside-containing plants, cassava root and the seeds of *Ostryoderris stuhlmannii*.

Municipal water supplies were tested for their fluorine content. All were found to be very low in content of salts of this element.

The construction of a new laboratory for the Government Analyst began at the end of the year.

REPORT OF THE RESEARCH LABORATORY.

Block Control of Malaria and Bilharzia.

The second year's work on malaria control in the Mazoe Valley using only benzene hexachloride wettable powder as a residual spray, proved just as successful as the work done in the previous year. The malaria incidence in the treated area was negligible and parasite rates in children living in the treated area have diminished greatly.

Beginning in September, 1951, five control teams have, using the same methods, started work in a group of 14 Native Reserves in Northern Mashonaland with an estimated population of 200,000. These reserves are ranged in an arc to the north and east of Salisbury and include some reserves which were contained in the Mazoe Valley Scheme during 1949-51. An interesting feature of this work has been the active interest and self-help displayed by the inhabitants of these areas who are making direct financial contributions towards the cost. Large-scale blood film surveys have been made in several of these Reserves in order to estimate the malaria base-line for the future control work.

Bilharzia control in the Mazoe Valley was carried out through the dry season of 1951 and all streams and rivers were treated with copper sulphate. Surveys of the streams treated during 1950 were made and a few locations where snails were still to be found were retreated.

The effect of these measures will be studied in coming years by urine surveys of young children who, if found infected, could only have become infected since the copper sulphating programme was carried out.

Large scale urine surveys for *B. haematobium* infection have been done and many thousand specimens examined. The figures in Native children of school age is alarmingly high.

Treatment of Bilharziasis.

In collaboration with the Physician-in-Charge of the Native Hospital, Salisbury, a trial of the new antimony preparation, which was mentioned in last year's report, has been completed. Over 30 patients were treated and only one patient showed any benefit from the drug.

The same drug, tri-sodium antimony gluconate, has been used elsewhere in intravenous therapy of bilharziasis, and we have begun trials of "fast treatment," as employed by Alves and Blair with sodium antimony tartrate, using a dosage scheme of 12 mgms. drug per kilogramme body weight. The chief feature of the new drug is said to be its non-toxicity when given by intravenous injection.

The trials so far do not bear out the promising reports from elsewhere.

Snail Studies.

An additional professional officer recruited to the staff has begun a long-term study of the ecology of Rhodesian rivers and pools which harbour or do not harbour the molluscan vectors of bilharziasis.

A much wider study of reputedly non-vector snails has also begun. An examination of the status of *Bulinus (Pyrgophysa) forskalii*, which has been incriminated as a vector elsewhere, has been started. This species has generally a patchy and scanty distribution in the Colony.

World Health Organisation Snail Reference Laboratory.

The laboratory acts as a reference laboratory for the southern and eastern areas of Africa and many collections of snails have now been received and identified. In turn specimens have been referred from here to the expert malacologists' panel set up by World Health Organisation. The work so far done and the exchanges of material which have taken place reveal some differences of opinion as to the identity of some of the vector snails particularly the planorbids. When the classification of snails confidently named as *Plan. pfeifferi* is called in doubt, it is realised that the nomenclature and classification of vector and potential vector mollusc needs much work and further collections of materials from as many areas as possible.

Amoebiasis.

A study of the incidence of amoebiasis by the examination of post-mortem material has been started in collaboration with the pathologist.

Trypanosomiasis.

Only a few human cases of this infection occur in Southern Rhodesia and these are now being concentrated at Salisbury hospital for treatment. The first case to be so treated, an African female living in the Zambesi Valley in the north-eastern part of the Lomagundi District, has revealed an infection presenting some peculiar features. The clinical picture suggests Gambian sleeping sickness and the parasitological and biological study of the trypanosomes do not suggest typical *Trypanosoma rhodesiense*. If she is indeed a case of *T. gambiense* infection, this would be a matter of great epidemiological importance because as far as her movements can be traced, she has never been outside Southern Rhodesia. Further work on this and other strains is in progress.